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# Reviews in

AD NO.

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NO. 7

TEMPERATURE FOR WORLD AIR ROUTES at heights of 10,000, 20,000, 30,000, 40,000 and 53,000 feet

with supplementary surface temperatures



AUGUST 1962



# TEMPERATURES FOR WORLD AIR ROUTES

AT HEIGHTS OF 10,000, 20,000, 30,000, 40,000 AND 53,000 FEET

WITH

SUPPLEMENTARY SURFACE TEMPERATURES

REVIEWS IN GEOPHSICS NO. 7

BY

RAYMOND M. WELLS

August 1962

THE BOEING COMPANY Transport Division Renton, Washington

Price \$25.00

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#### ASSTRACT

Seasonal and annual great circle route temperatures in degrees Celsius are computed for 50-, 75- and 85-per cent reliabilities of occurrence, i.e. temperatures which are not expected to be exceeded 50, 75 and 85 per cent of the time respectively. The temperatures and their standard deviations are computed over some 2000 selected air routes at the 10,000-, 20,000-, 30,000-, 40,000- and 53,000-foot levels. The great circle distance between terminil is also tabulated. A 7090 was used to compute the route temperatures. Input data for the program consist, for each level, of a grid composed of the mean temperature and its standard deviation at the intersection of each 5° of latitude with each 10° of longitude between 60°S and 60°N and at the intersection of each 5° of latitude with each 20° of longitude south and north of 60°S and 60°N respectively.

Supplementary airport surface temperatures are tabulated by month, quarter, half year and year for the 0, 50, 75, 85, 95 and 100 per cent probability of not being exceeded. Lackey's method, adapted for the 7090, was used to compute the surface temperatures.

#### **FORWARD**

In 1962 the Transport Division of The Boeing Company published three documents on equivalent winds over commercial and military air routes. These documents are "Great Circle Equivalent Route Winds for Military Application," D6-9175; "Equivalent Winds For North American Air Routes," D6-9176; and "Equivalent Winds For World Air Routes," D6-9177. As a companion to the "wind books" three documents on route temperature and airport surface temperatures were prepared. These are "Great Circle Route Temperatures For Military Applications," D6-7175; "Temperature For North American Air Routes," D6-7176; and "Temperature For World Air Routes," D6-7177.

The industry and ingenuity of L. W. Stumpf for preparing the route temperature program and of R. C. Langan for preparing the surface temperature program, both of the Engineering Computing and Analysis Staff, are gratefully acknowledged. Thanks are also due Alice Post for preparing the route index and for assisting in preparing the input data.

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# TEMPERATURE FOR WORLD AIR ROUTES

at heights of 10,000, 20,000, 30,000, 40,000 and 53,000 feet with supplementary surface temperatures

#### I. INTRODUCTION

Alrcraft operate in a thermally dynamic environment. To determine the effect of this environment on the economic capability and corrier sultability over established and new route systems requires knowledge of the long term temperature conditions that can be expected at the terminals, during ascent and descent, and along the flight path. This document is an attempt to provide temperature data to meet some of these needs.

Route Temperature. Seasonal and annual great circle route temperatures in degrees Celsius are presented for 50-, 75- and 85-per cent reliabilities of occurrence, i.e. temperatures which are not expected to be exceeded 50, 75, and 85 per cent of the time respectively. These data are presented as the difference between the per cent reliability temperature and the International Standard Atmosphere temperature.

Airport Temperature. Surface temperatures in degrees Fahrenheit are computed for each airport. These surface data are organized by month, by quarter, by half year, and by year for the 0, 50, 75, 85, 95 and 100 per cent probability of not being exceeded.

Because of the broad coverage of route systems and of airports, the temperature tabulations are published in three documents: Great Circle Route Temperatures for Military Applications, D6-7175; Temperature for North American Air Routes, D6-7176; and Temperature for World Air Routes, D6-7177.

#### II. TEMPERATURE TABULATIONS

#### A. METHOD

#### 1. Route Temperatures

Route temperatures were computed on the assumption that the distribution of observed temperatures about its mean at each point along a route approximates the normal or Gaissian distribution. This approximation is closely the case for winds but it generally weaker for temperature, since departures of temperature from normality in the vicinity of the polar tropopause and at levels subjected to surface based inversions are sometimes appreciable. Thus temperature estimates of extreme values and of small ranges can result in large errors at levels subjected to seasonal inversions and at mean tropopause heights. A general formula for the "abnormal" distribution of temperature, however, is not available. The mean route temperature and its standard deviation completely describe the normal distribution.

The mean route temperature is determined by first dividing the route into an integral number of segments 200 miles or less in length. Next a temperature is calculated at the mid point of these segments by averaging the four nearest temperature values which enclose each mid-point. These four temperatures in turn are assigned weighted values in proportion to their proximity.

along the route are used to compute the temperature for the entire route. With reference to Figure 1, the mean route temperature, T<sub>AB</sub> is given by

to the point. The averages at points

$$T_{AB} = \begin{bmatrix} \tilde{T}_{n} \end{bmatrix}$$
 (1)

Fig. I. Route Temperature

where  $\overline{I}_n$  is the time average temperature at the mid point of segment n. The bar denotes a mean over a long period of time while the brackets denote the mean value over the route.

# 2. Standard Deviation

From physical considerations the temperature at points along a route are related to one another <sup>1</sup>. It is therefore necessary to consider the correlation between the temperature at one point and the temperature at another point along the route. While the correlation of temperature with distance varies somewhat with height and region <sup>1</sup>, such refinements were not incorporated in the tabulations because of the lack of published information on the variability of temperature.

As with mean route temperatures, the route standard deviation is computed by calculating the standard deviation at the mid point of each segment (Fig. 1) by averaging the four nearest standard deviation values which enclose each mid point. The four standard deviations are assigned weighted values in proportion to their proximity to the point. The averages at these points along the route are used to compute the standard deviation for the entire route. The expression for computing the route standard deviation,  $\sigma$ , is

$$\sigma = t \left[ \sigma_0^2 \right]^{1/2} \tag{2}$$

where:  $\sigma_{\mathbf{n}}$  = Standard deviation at point n along the route  $\mathbf{t}$  = Factor to convert the mean of the standard deviation at

points along the route,  $\left[\sigma^2\right]^{1/2}$ , into the route standard deviation (Table 1).

Table i. Correlation of Temperature with Distance Route Length – n.  $\min$ 

	0	500	1000	1500	2000	2500	3000	3500	4000
t	1	0.89	0.79	0.73	0.67	0.61	0.55	0.50	0.45

Durst shows that the correlation of north and south wind components with temperature is small. Consequently the point correlation of equivalent winds with temperature is also likely to be small. As a result equivalent winds and route temperatures may be used together without appreciable error.

# 3. Great Circle Distance

Route lengths in nautical miles are computed over the great-circle course,

i.e. the least distance on a sphere, between terminals. The expression used to compute great circle distances between

terminii  $P_1$  ( $\psi_1\lambda_1$ ) and  $P_2$  ( $\psi_2\lambda_2$ ) is

$$D = 60 \cos^{-1} \left[ \sin \psi_1 \sin \psi_2 + \cos \lambda_1 \cos \lambda_2 \right]$$

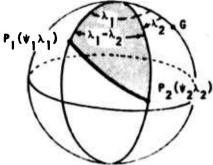
$$\cos \left( \lambda_1 - \lambda_2 \right)$$
(3)

where:

D = Great circle distance in nautical miles

♥ = Latitude

 $\lambda$  = Longitude  $\cos^{-1} \left[ \right]$  = Angle expressed in minutes.



Flg. 2 Great Circle Distance

South latitudes and east longitudes are considered negative and north latitudes and west longitudes are considered positive.

# 4. Annual Route Temperature

Annual route temperatures are computed from the seasonal values by an Iterative process in which temperatures are found such that 50, 75 and 85 per cent of the total area under all four seasonal temperature distribution curves lies to their left. For example in the hypothetical distribution of seasonal route temperatures in Figure 3, the 50-. 75- and 85-per cent annual temperatures -60 are estimated to be -43, -36 and -32

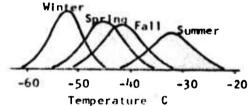


Fig. 3. Hypothetical Seasonal Temperature Distribution

# 5. Alrport Temperature

respectively.

Lackey's method was used to compute surface reliability temperatures from the monthly mean, extreme minimum and the extreme maximum temperatures. This technique, as Lakcey states, "depends on the statistically demonstrated area-wide similarity of the normalized cumulative frequency curves of observed hourly temperature for given positions of the mean between the absolute extremes."

The substance of Figure 6 was Integrated into a 7090 program. This program with the mean, extreme minimum and extreme maximum temperature as input data, was used to compute surface reliability temperatures.

#### B. INPUT DATA

# 1. Route Temperatures

The input data for the 7090 program used to compute route temperatures were obtained principally from Upper Air Temperature Over The World<sup>3</sup>. For each level the data consist of grids composed of the mean temperature and its standard deviation at the intersection of each 5° of latitude with each 10° of longitude between 60°S and 60°N and at the intersection of each 5° of latitude with each 20° of longitude north of 60°N and south of 60°S.

The temperature grids are prepared for the 10,000- (700 mb), 20,000- (500 mb), 30,000- (300 mb), 40,000- (200 mb) and 53,000- (100 mb) foot levels for each of the four mid season months: January, April, July and October.

# 2. Airport Temperatures

The mean, extreme minimum and extreme maximum temperatures used to compute surface temperatures for given reliabilities of occurrence were obtained from United States<sup>4, 5</sup>, English<sup>6</sup>, Canadian<sup>7,8</sup>, and German<sup>9</sup> climatic summaries.

# C. TABULATIONS

# 1. Route Temperature

Mid season monthly 50-, 75- and 85-per cent reliability temperatures and their standard deviations and the annual 50-, 75- and 85-per cent reliability temperatures are computed over selected air routes (Table 5). The tabulations are arranged such that route temperatures are given as the difference between reliability route temperatures and the International Standard Atmosphere temperature. The mean route temperature for each season is also tabulated. Across from each route pair is listed the great circle distance separating the terminals. The tabulations are ordered alphabetically by the terminals that identify each route. In the index (Table 8), each route is referenced under both of its terminals.

An alphabetical listing of terminals with their airport names, geographical coordinates, elevation, and length of longest runway is presented in Table 7.

# 2. Airport Temperature

An alphabetical listing of airport monthly, quarterly, semi-annual and annual surface temperature for 0- (extreme minimum), 50- (mean), 75-, 85-, 95- and 100- (extreme maximum) per cent probability of not being exceeded are tabulated (Table 6). The average daily maximum temperature is also tabulated.

#### III. USE OF TABLES

#### A. ROUTE TEMPERATURE RELIABILITIES

Two methods are presented for computing route temperatures for reliability values in addition to those tabulated. While these methods apply only to observations which follow the "normal" law, as stated in Upper Air Temperatures Over The World<sup>3</sup>, "reasonable estimates of the range of temperature can be made wherever the standard deviation does not exceed (as a rough guide) about 4°C". It is further stated that even at levels affected by surface inversions (in January: 700 and 500 mb in Alaska, Canada and the U.S.S.R. and at 700 mb in Japan and Korea) and at levels near varying polar tropopauses (in January and April: 200 and 150 mb in Canada and 200 mb in the United States, British Isles, south Scandinavia and central Europe) a rough estimate can still be made of the temperature range which includes about 80 per cent of the observations. Because of the abnormal shape of the frequency distribution, estimates of smaller ranges or of extreme values will be very badly in error.

### 1. Error Factor Method

Route temperature reliabilities are computed by adding the product of k times the route standard deviation (tabulated values) to the mean route temperature, where k is a factor derivable from the error function. Values of k are given in Table 2 and are illustrated in Figure 4. Use of Table 2 is illustrated in computing the 85 per cent reliability temperature over the London to New York route during summer at 30,000 feet. From Table 5 the mean July temperature is -42°C and the standard deviation is 4°C. The

estimated temperature which is not exceeded 85 per cent of the time is -38°C,

$$-42 + (1.04 \times 4) = -38^{\circ}C$$

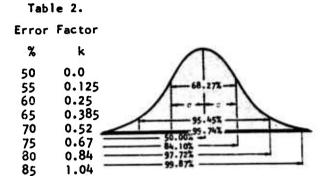
For some problems it may be necessary to compute the temperature range over a route within which a given per cent of observations ite.

Such route temperature ranges may be computed with aid of Table 3. In the above example 80 per cent of the route temperatures at 30,000 feet in July over the London to New York route lie within -42 ± (1.28 x 4), i.e. between -37°C and -47°C.

# 2. Arithmetic Probability Paper Method

Arithmetic probability paper is arranged with the per cent cumulative frequency scale printed on the ordinate such that the integral

$$Q(x) = \int_{\sqrt{2}}^{1} \int_{-\infty}^{x} e^{-x^{2}/2} dx$$
 (4)

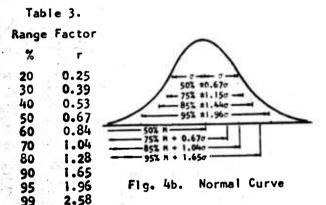


1.28

1.65

90

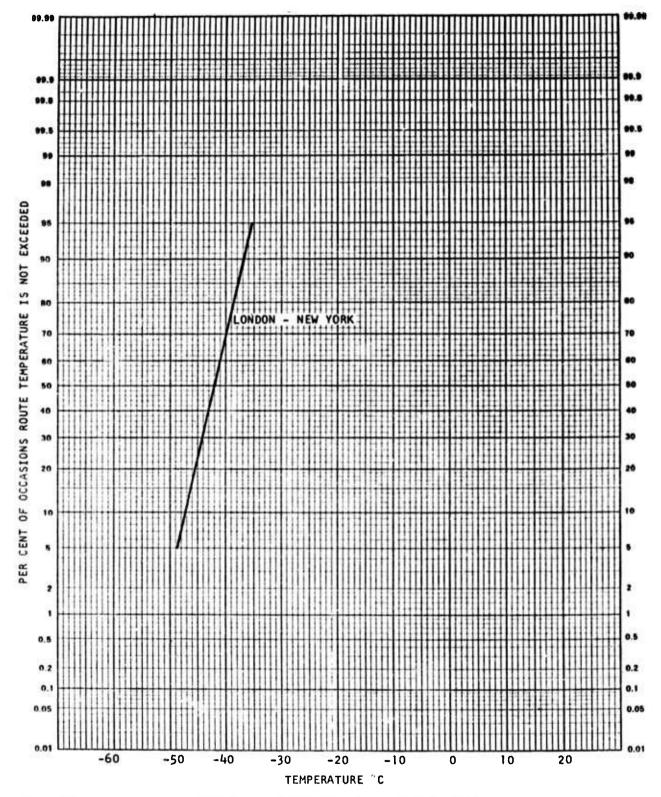
95



(a)

of the normal frequency curve piots as a straight line while the abscissa has a linear scale. Thus to obtain a frequency distribution of say the route temperature during summer at 30,000 feet over the London to New York route, look up the 50 per cent (-42°C) route temperature and its standard deviation (4°C) in Table 5. Next piot -42 on the 50 per cent value of the ordinate scale and -38°C (-42 + 4) on the 84 per cent ordinate value and draw a straight line through these points. See Figure 5. Use of arithmetic probability paper is illustrated with two examples.

- a. 85 per cent of route temperatures are less than -37.8°C
- b. Between 10 and 90 per cent of the time route temperatures range between -42.1°C and -36.9°C.



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FIGURE 5. ARITHMETIC PROBABILITY PAPER

# B. GREAT CIRCLE ROUTE LENGTH

The route length in nautical miles is computed over the great-circle course, i.e. the least distance on a sphere, between terminals (Fig. 6). A nautical mile is the length of one minute of arc along a great circle on the earth's surface, i.e. the earth's circumference is  $360 \times 60 = 21,600 \text{ n. miles.}$  For example the great circle distance between Rio de Janeiro (-22°49', 43°15') and Istanbul (40°58', -28°49') may be computed from (3).

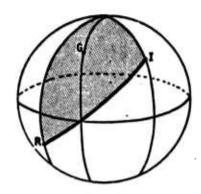


Fig. 6
Great Circle Route Length

$$D = 60 \cos^{-1} \left[ \sin \psi_1 \sin \psi_2 + \cos \psi_1 \cos \psi_2 \cos (\lambda_1 - \lambda_2) \right]$$
 (3)

With the aid of Table 4,

$$D = 60 \cos^{-1} \left[ -\sin(22^{\circ}49^{\circ}) \sin(40^{\circ}58^{\circ}) + \cos(22^{\circ}49^{\circ}) \cos(40^{\circ}58^{\circ}) \cos(72^{\circ}04^{\circ}) \right]$$

$$= 60 \cos^{-1} \left[ -0.039930 \right]$$

$$= 5537 \text{ n. mi.}$$

$$\sin(90 + 0) = \cos 0 \cos(90 + 0) = \sin 0$$

$$\sin(90 - 0) = \cos 0 \cos(90 - 0) = \sin 0$$

### C. AIRPORT TEMPERATURES

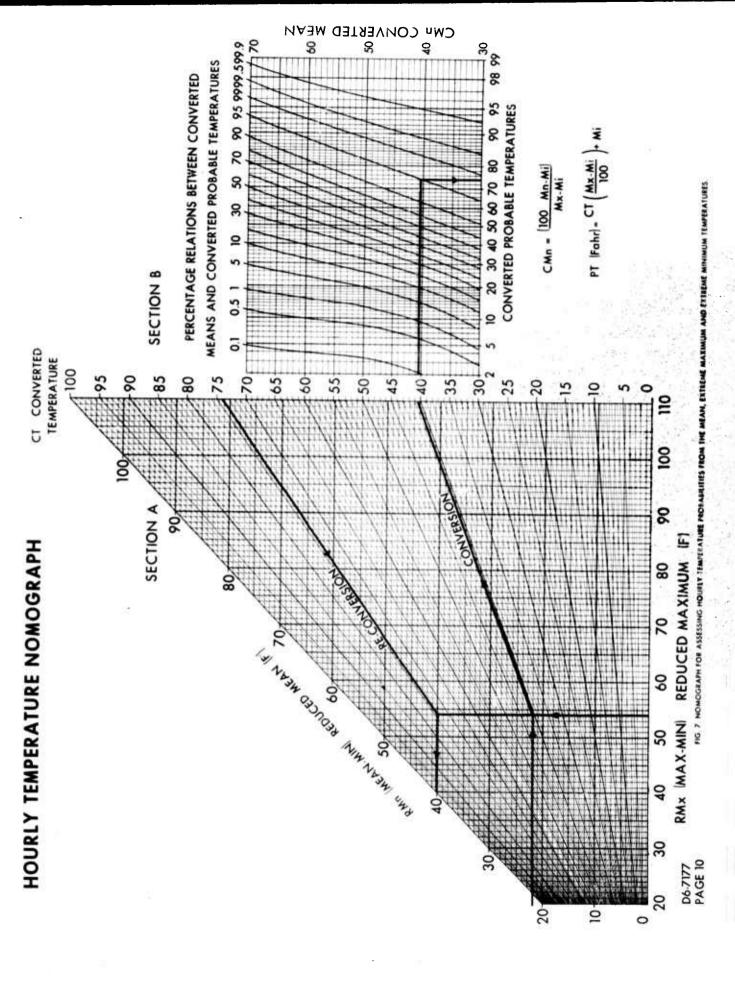
# i. Hourly Temperature Nomograph

Surface temperatures for reliabilities of not being exceeded can be computed by mean of the Hourly Temperature Nomograph<sup>2</sup> (Fig. 7). Use of this nomograph is explained with an example. To compute the July 95 per cent reliability temperature at an airport, it is first necessary to know the July mean, extreme minimum and extreme maximum temperatures, Let these values be 72°F (mean), 50°F (minimum) and 104°F (maximum).

Step One: Normalization to a 100 - scale

Subtract the extreme minimum from the mean to obtain the reduced mean (RMn). Next subtract the mean from the extreme maximum to obtain the reduced maximum (RMx).

$$RMn = 72 - 50 = 22^{\circ}F$$
  
 $RMx = 104 - 50 = 54^{\circ}F$ 



Step Two: Converted Probable Temperature - PT

At the intersection of RMn and RMx on Section A of the nomograph draw a straight line along the sloping diagonal to obtain the converted mean (CMn) on the converted temperature scale, i.e.  $CMn = 40.7^{\circ}$ .

$$CM_{n} = \frac{100 (M_{n} - M_{1})}{M_{x} - M_{1}}$$

$$= \frac{100 (72 - 50)}{104 - 50} = 40.7$$
(5)

Next enter Section B of the nomogram across to the desired 95 per cent probability sloping line. Read the converted probable temperature at the bottom of Section B, i.e.  $CT = 74^{\circ}$ .

Step Three: Reconversion

Next enter the converted temperature scale at  $74^{\circ}$  and follow down the sloping line to the intersection with RMx =  $54^{\circ}$  and then across to the corresponding reduced mean, i.e. RMn =  $40^{\circ}$ F. The 95 per cent reliability temperature is now obtained by adding the extreme minimum to the reduced mean, i.e.  $50 + 40 = 90^{\circ}$ F, or alternatively,

PT = CT 
$$\frac{Mx - HI}{100} + HI$$

(6)

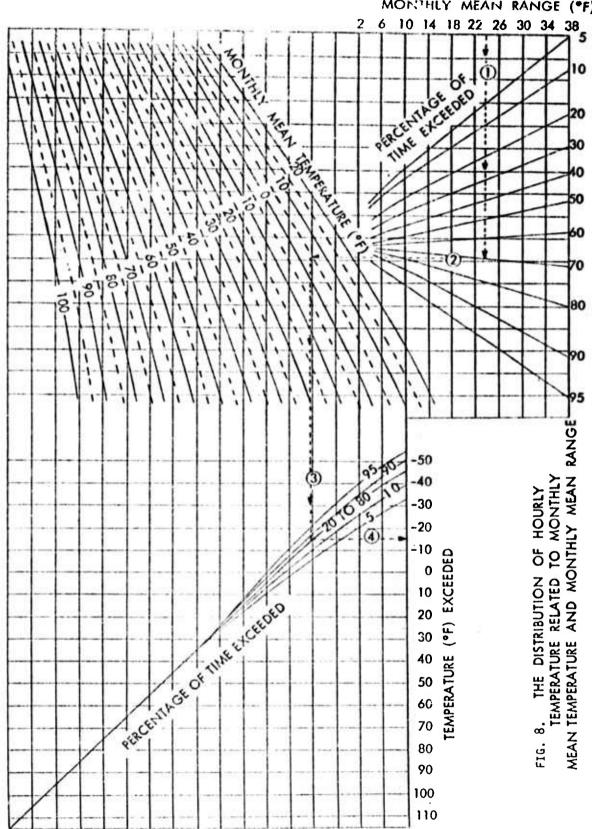
PT(95%) = 74  $\frac{104 - 50}{100} + 50 = 90^{\circ}F$ 

Reliability. Hourly temperature records for twenty stations ranging in latitude between 12°N and 70°N were used to prepare the Hourly Temperature Nomograph. The performance of the nomograph was then tested on 40 different and widely scattered stations. For each station, the actual three essential items for each of the four mid season months were processed by the nomograph to determine 13 percentile levels (1,5,10...99%). The hourly temperature frequencies so computed were compared with the actual recorded frequencies. The results of this test revealled that the nomograph is most accurate during summer and that 91 per cent of the divergencies were less than 3°F and 98 per cent were less than 5°F.

# 2. Alternate Method for Estimating Airport Reliability Temperatures

In the event that the extreme maximum and extreme minimum monthly temperatures

I



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are not available for an airport, reliability surface temperatures can be estimated from the monthly mean and monthly mean daily maximum (average daily maximum) temperatures by means of a nomogram 10 developed by the Air Weather Service. The nomogram is based on a graphical correlation method which was used to develop the joint functions between the mean and the monthly mean range and the distribution of hourly temperatures to avoid any assumption concerning the slope of the hourly temperature distribution. The monthly mean range in temperature is the absolute difference between the monthly mean daily maximum and mean daily minimum temperatures or twice the difference between the monthly mean daily temperature.

Use of the nomogram is illustrated by estimating the temperature which is exceeded 70 per cent of the time at a station with a January mean monthly temperature of  $-5^{\circ}F$ , a mean maximum temperature of  $7^{\circ}F$  and a monthly range of  $24^{\circ}F$ ,  $2 \times [7 - (-5)]^{\circ}F$ .

Step One. Enter the graph at 24° in the monthly mean range axls and proceed vertically downward to the 70 per cent line (Fig. 8).

Step Two: From this intersection proceed horizontally to the -5°F monthly mean temperature isopiet.

Step Three: From this point proceed vertically downward to the intersection with the 20 to 80 per cent line and then go horizontally to the temperature exceeded axis where the temperature estimate of -14.8°F is obtained. Conversely, by proceeding from -14.8°F in the reverse order, the per cent of time that this temperature is exceeded is estimated to be 70 per cent.

# 3. Aerodrome Reference Temperature

For some purposes the Aerodrome Reference Temperature (A.R.T.) is used as a conservative measure of airport temperature. The A.R.T. is defined as

A.R.T. = 
$$T_1 + \frac{T_2 - T_1}{3}$$
 (7)

where:  $T_1$  = the monthly mean temperature for the hottest month of the year (that which has the highest mean daily temperature).

 $T_2$  = the monthly mean dally maximum temperature for the hottest month.

To use temperature scales, place straightedge on temperature corresponding to  $T_1$  and  $T_2$  on the outer scale and read A.R.T. from center scale.

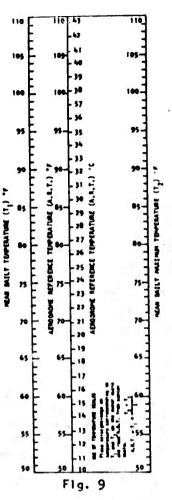
With the old of Figure 9, the A.R.T. at Boston with  $T_1$  (July) =  $72^{\circ}F$  and  $T_2 = 80^{\circ}F$  is  $74.7^{\circ}F$ , or

A.R.T. 
$$72 + \frac{80 - 72}{3} = 74.7^{\circ} F$$

#### IV. STANDARD ATMOSPHERES

#### A. INTERNATIONAL STANDARD ATMOSPHERE

A standard atmosphere is a hypothetical vertical distribution of atmospheric temperature, pressure and density which by intermational or national agreement is taken to be representative of the atmosphere for the purpose of altimeter calibra-



tions, aircraft design and performance calculations, etc. The internationally accepted standard atmosphere is called the International Civil Aeronautical Organization (ICAO) standard atmosphere or the International Standard Atmosphere (ISA)(Fig. 10). It should be emphasized that this model will never completely match the actual atmosphere and only rarely will it approximate the average value at all altitudes simultaneously.

The ISA atmosphere is a self-consistent model in which no water vapor is assumed and the air is assumed to obey the perfect gas law,  $\rho = PM/TR$ , and the hydrostatic equation,  $dP = -g/\rho/dZ$ , which when taken together yield the barometric equation which relates temperature, pressure and density variations in the vertical

$$d \ln P = -gM/TR \quad dZ \tag{8}$$

where:  $\rho = mass density$ 

P = pressure

M = mean molecular weight of air

T = temperature in degrees absolute

R = universal gas constant

g = acceleration of gravity

Z = geometric aititude

For calculating pressures below 100,000 feet, g and M are usually assumed constant.

#### B. EXTREME ATMOSPHERES

Atmospheres representative of extreme conditions likely to be encountered over geographical areas of the world are briefly discussed.

# i. Arctic Winter Atmosphere

This atmosphere is based on the average January temperature for selected pressure surfaces between  $60^{\circ}N$  and  $90^{\circ}N$ . January is representative of the coidest month in the Arctic. The atmosphere is hydrodynamically consistent.

# 2. Arctic Summer Atmosphere

This atmosphere is based on the average July temperature for selected pressure surfaces between  $60^{\circ}N$  and  $90^{\circ}N$ . July is the warmest month in the Arctic. This atmosphere is also hydrodynamically consistent.

# 3. Tropical Atmosphere

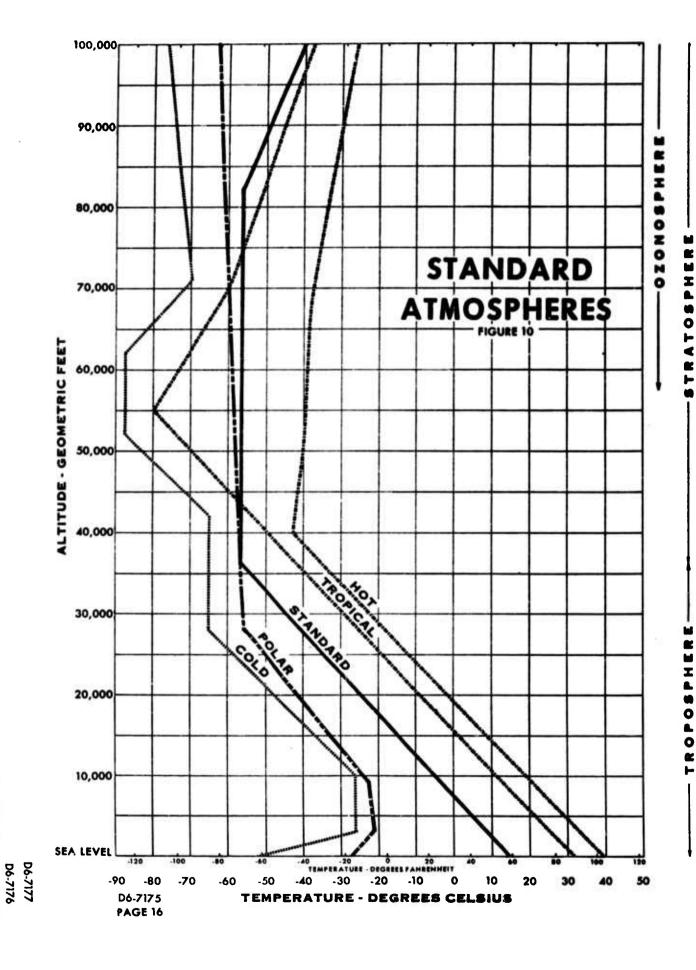
This atmosphere represents conditions which may be encountered between 30°S and 30°N except for desert areas and certain parts of the ocean.

# 4. Hot Atmosphere

The hot atmosphere represents temperature extremes which are exceeded only 10 per cent of the time in the hottest geographical areas.

## 5. Cold Atmosphere

The cold atmosphere represents temperature extremes which are exceeded 90 per cent of the time in the coldest geographical areas.



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TABLE 5

ROUTE TEMPERATURES AT THE 10,000-, 20,000-, 30,000-, 40,000-, AND 53,000-FOOT LEVELS

TABLE 5.	ENROUTE	TEMPERATURES !	AND STANDARU	OFVIATION IN	DEGREES CELSIUS	 	-

	TABLE 5.	ENROL	JIE T	EMPER	TURES	ANO	STAN	OAKU	OFAI	ATIO	N IN	OEG	REES	CELS	105	FOR	GREA	CIR	CLE	AIR F	OUTES			
HE 1 GH1								ENKO				TURE				_					r-	OARO	0EV1A	TION
FEET	15A TEMP.	50•	JANU 050	ARY 0/5 0	15 4	0 050	RIL		T -	JU	LY	085	1.0		OBER	085			MUAT	D85	1			OCT
ACCRA 53.000 40.000 50.000 20.000	-56.5 -44.5 -21.2		-18 ·	-14 -1 5	5 -7 6 -5 7 -5	1 - 1 kg	-12 6 11	-11 7 12 14 14	-/4 -51 -29 -4 12	-18 6 15 17	-10	-15 8 17	-73 -53 -54 -8	-17 3	-15 5 12	- 14 6 12	1	10	- 14 5 13	-15 6 14	JAN 3 3 2 2 2 2	3 4 2 2 2	JUL 06 N 3 2 2 2	
\$3.000 \$0.000 \$0.000 20.000 10.000	-56.5 -44.5 -21.2 - 4.6	LANCA -72 -55 -59 -12 5	-16 - 2 5 9	11 1	5 -5 8 -31	5 S	1.1	-12 7 12 14 14	-74 -53 -33 -6 13	-17 12 15	-15 5 15 16	-14 6 14 17	-74 -53 -34 -8	-17 3 10 14	-15 5 12 15	- 14 6 13 15	-73 -53 -35 -9	3 V	-14 5 11 14 15	5 12 15	3 3 2 2 2 2	3 4 2 2 2 2	728 No. 3 2 2 2 2 2	.M1. 3 2 2 2 2
53,000 40,000 50,000 20,000 10,000	0 OAKAK -56.5 -56.5 -44.5 -21.2 - 4.6 0 FREE!	-77 -56 -55 -8	-21 - 5 10 15		5 -52 2 -31	16	-18 / 15 16 16	-17 8 15 16 16	-76 -54 -55 -6 10	-20 2 12 16 15	-18 5 15 17 16	-17 4 16 17 10	-78 -52 -31 -6 10	-21 5 13 16 15	-19 6 14 16 16	-19 7 15 17 16	-77 -55 -52 -7	-20 12 15 14	-18 5 ,4 16 15	-17 6 14 16 16	3 3 2 1 1	11 5 5 2 2 2	59 N. 3 2 2 1	3 2 2 1
55.000 40.000 50.000 20.000 10.000	-56.5 -50.5 -44.5 -21.2 - 4.6	-70 - -54 -54 -M	2 11 16 15	17 -1. 12 1. 16 1. 16 1.	-52	5 14 15	- I v / / / / / / / / / / / / / / / / / /	-18 8 16 17 17	-70 -54 -12 -5 10	-20 2 12 16 14	- 18 5 13 17 15	-17 4 14 17 16	-78 -52 -51 -6 10	-22 5 14 16 15	-20 6 15 16	-19 7 15 17 16	-77 -53 -52 -6 10	-21 h 13 15 16	-19 5 14 16 15	-18 6 15 17 16	3 2 1	3 5 2 2 2	97 N. 3 2 2 1	#1. 3 2 2 1
55,000 40,000 30,000 20,000 13,600	-56.5 -56.5 -44.5 -21.2 - 4.6	-76 - -55 -52	20 - 4 15	17 -16 6 16 1 17 1 15 16	7 -52 5 -51 7 -6	13 15	-17 7 15 17 15	-16 d 15 17 10	-71 -52 -35 -7	-15 6 11 16 10	-13 6 13 16 12	-12 7 13 16	-75 -52 -52 -7 10	-17 h 12 15 14	-15 6 16 16	-16 7 15 16 16	-14 -52 -32 -6 9	-18 4 12 15 13	-15 6 14 16 15	-14 8 15 17 16	5 5 2 1 2	25 3 3 2 2 2 2	22 N. 9 2 2 2 2 2	H1. 3 3 2 2 2
55,000 40,000 50,000 20,000 10,000	-50.5 -50.5 -44.5 -21.2 - 4.6	-54 -54 -8	15	19 - 10 to 3 11 12 16 13	-52 -50	-20 5 15 15	-18 7 16 16	-1/ 0 16 17 17	-76 -54 -32 -5 10	-20 2 13 16 15	-18 5 14 17 15	-17 15 18 10	-77 -52 -31 -6 10	-21 5 16 16	-19 6 15 16	-18 7 15 16 10	-11 -55 -32 -6 10	-20 6 13 15	- 19 5 14 16	-18 6 15 17 16	5 5 2 1	5 5 2 2 2	3 2 2 1	3 2 2 1
\$0,000 \$0,000 20,000 10,700	-56.5 -56.5 -44.5 -21.2 - 4.6	-54 -54 -7	14 1	19 -16 6 5 12 12 15 15	-52 -50 -6	-20 5 15 16	- IV - IO IO IO		-76 -54 -52 -5	-20 2 12 10	-18 - 5 15 17	-17 6 16 17 15	-7d -52 -51 -6 10	-21 - 5 14 16 15	-20 6 15 16	-19 7 16 17 16	-77 -55 -52 -6 10	-21 - 13 15	-19 5 16 16	-18 6 15 17 16	3 3 2 1	3 3 2 2 2	7 N.A 3 2 2 1	11. 3 2 2 1
10.000	-50.5 -50.5 -44.5	-71 - -50 -40 -15		2 -11 5 5 6 7 0 11	-70 -55 -56 -11	-15 • • • • • • • • • • • • • •	11 - 5 10 12 12	6	-71 - -55 -54 -7	-15 - 5	- 13 - 5 12 15 16	-12 6 13 16	-/2 - -56 -35 -4	-16 - 5 10 13	-14 - 6 11 14 15	-13 5 12 15	-71 -54 -36 -10	2 9 12	12 ·	-11 5 11 16	5 4 2 2 2	246 5 6 2 2 2	9 N.H 3 2 2 2 2	2 2 2 2
0.000 10.000 20.000	-50.5	-77 -2 -54 -32 -6	21 -1 5 12 1	V -18 4 5 5 14 6 17 5 16	-77 -52 -50 -6	-21 - 3 - 15 - 17 - 15 -	-14 - / 16 18 10	B	-76 - -54 - -52 -5	19 - 3 12 16	-17 - 3 15 17	5	-77 - -52 -31 -6	21 - 5 14 16	19 - 6 15 17	-1m 7 16 17	-77 -53 -51 -5	-20 - 6 13 16	18 - 5 15 17	16 16 16	3 2 2 1	111 5 5 2 2 2	0 M. M 5 2 2 1	2 2 1 2
\$0,000 20,000	-50.5 - -50.5 -	-/1 -1 -55 -66 -13	8 1	2 -11 4 5 6 7 0 10 0 11	-64 -56 -16 -11	-15 - 5 9 10	5 10 12	1 .	- /2 - -55 -55 - / 12	15 - 11 15 17	16 - 15 16 18	6	-12 - -54 -35 -8	10 15	15 - 6 11 16 15	12	-71 -54 -36 -10	8 12	12 - 6 11 13	11 5 12 14 15	5 4 2 2 2	204	7 N.M 5 2 2 2 2	2 2 2 2 2
10.000 20.000 10.000	->6.5 - ->6.5 - -44.5 - -21.2 -	16	2 5 5	7 - N 5 5 5 6 7 8 8 7	-66 -55 -39 -13	-9 2 6 8	7	≠i-	- 52 - 54 8	1.5	12 15	13		2 7 11	12	10	-67 - -54 -38 -12	2 6 9	9	-7 6 10 15	5 5 5	2/5: 5 5 5 5	7 N.M) 5 5 5 2	1. 5 5 5 2
	-50.5 - -50.5 - -44.5 - -21.2	18 -2	2 -20 5 0 1 12 4 1	2 13	-78 -53 -51 -6	15	6 15 16	15 -	-54 -55 -6	2 12 15	16	4 -	-55 -51 -6	16	5 15 17	6	-11 - -54 -52 -6	15	4 14 16	17 5 15 17	5 5 2 2	3642 5 5 2 2 2	N.M1 3 2 2 1	
40.000 - 30.000 - 20.000 -	-56.5 - -56.5 - -44.5 -	JANE1 77 -2 54 52 1 -5 1 9 1	0 -14 3 -1 2 11 6 1	14	-11 -52 -51 -6 9	15 15	15 17	8 -	- 7	4 12 14	5 13 15	0	-1	12	5 14 16	6 .	-6	12 15	6 14 16	14 7 15 17	4 5 2 2 2	\$ 4 2 2	N-M1 3 2 2 2	
40.000 - 50.000 -	-56.5 - -56.5 - -44.5 - -21.2 -	65 - 55 45 18	2 9		-64 -54 -40 -14	4	, ,	8 -	-5	10 18 18	12 20 20	14 - 21 -		? ? 10	10 12	ii :		8	8	-6 10 14 16		1775 4 5 4 5	N. M) 4 5 5	
•D01FF	ERENCE B	ETWEE	N IN	ICA 1E	O PER	CENT	REL	1 A B E L	177	1EMP	ERAT	URE A	ND 1	NIEK	MATI				ATM	OSPHEI	RE 1EH	PERAT	URE.	

THE BOEING COMPANY TRANSPORT OIVISION

NO. 06-7177 PAGE 19

EMPINITE	1 CMULUALINES	AND STANISHOO				
FINADOLE	I EMPERATORE?	AND STANDARD	DEVIATION IN	DEGREES CELSIUS	FUR GREAT	CINCLE AIR MOUTES

-			ENAU	016	LEMP	EKAI	0463	A IND	3187	URRU	DEVI	4110	10 110	UEG	KEE 2	CEES	1102	FUK	GREAT	CIRI	LLE	AIR H	OUTES			
	HE 1GH1 - IN - I EE 1	ISA ILMP.			UARV		[		HIL	LAROL		JU	LY	TURE	Τ.,		OHER		Ι		HUAL		1		0E V 1 A	
				-	0773	טאיז	1 30	030	075	003	130	050	075	085	1 50	050	0/5	D85	1 20	050	075	085	JAN	APH	JUL	0C 1
	51.000 10.000 30.000	-56.5 -44.5 -21.2	-78 -54 -52 -4		-20 15 16	14	-7d -57 -50 -5	5 14 16	16		-76 -52 -50 -5	14	16 16	16	-78 -52 -51 -6 10	-22 4 14 16	15	- 19 6 16 17 16	-78 -55 -51 -5	-21 4 14 16 15	-19 6 15 17	-10 7 16 18 18	5 2 2 2 2	5 5 2 2 2	457 N. 5 2 2 2 2	.M1. 5 2 2 1
	4001S A 55,000 40,000 50,000 10,000	-50.5 -50.5 -44.5 -21.7	-74 -74 -54 -57 -10		-15 4 V 15	10	-74 -55 -54 -0	- 17 - 11 - 15 - 15	-15 0 15 14 15	-14 7 15 15 15	- 75 -50 -28 -4 15	- 1d 7 17 17 20	-16 H 16 19 21	¥	-75 -51 -51 -7	- 10 5 12 14 14	15	- 15 0 14 10 15	-74 -52 -55 -7 10	-18 12 14 14	-15 6 14 16 17	-14 8 15 17 18	5 5 5 2 2	5 5 2 2 2	590 N. 5 2 2 2 2	M1. 5 2 2 2
	AUDIS A 51,000 40,000 10,000 20,000 10,000	-50.5 -50.5 -44.5 -21.2	BEIH -72 -54 -17 -11		-14 -5 -7 -11 -11	-15 6 8 12 12	-12 -55 -55 -10	- 15 - 3 - 10 - 12 - 12	-15 6 11 15	-12 7 12 16	-74 -49 -28 -4 14	- 1A - 7 - 17 - 17	-16 18 17 20	-15 V 19 19	-74 -55 -54 -6	-17 5 11 15	12 15	-14 5 15 15	-75 -52 -54 -8	-16 4 11 15	-14 6 15 15	-15 7 15 16 17	5 2 2 2	3 4 2 2 2 2 2	501 N. 2 2 2 2	MI. 3 2 2 2 2
	40015 A 51,000 40,000 30,000 20,900 10,006	8A8A 10 ->0.5 ->0.> ->0.> -44.5 -21.7		AY -21 2 12 15 14	- I v 4 16 10	-18 5 15 17	-78 -52 -31 -6 10	-/1 5 15 16 15	-1v / 15 17	-1H -16 1H 17	-76 -50 -24 -4	-20 6 16 17 18	- 1d d 1/ 16	-17 9 In 19	-7R -55 -51 -6	-22 k 15 16 14	-20 5 15 17	- 19 6 16 17	-76 -52 -51 -5	-21 4 14 16	-19 6 15 17	- 1d / 16 1d 10	5 5 5 2 2	20 5 5 2 2	072 N. 5 5 2 2 2	M1. 5 5 2 2 2
	40.000 10.900 25.900	04sA 10 -50.5 -50.5 -44.5 -21.2 - 4.6	CA1d -75 -54 -5n -10		-15 6 15 12	-14 5 4 15	-75 -55 -54 -9	-16 5 11 15	-14 5 12 14	-15 7 15 15	-75 -50 -2d -4	-18 7 10 17 18	-17 8 18 18 20	-16 v 16 1v 20	-15 -55 -35 -7	-18 5 11 14	-16 5 13 15	-15 6 14 16 15	-14 -52 -55 -1	-16 11 16	-15 6 14 16 16	-14 7 15 17	5 5 2 2 2	1 : 5 : 5 : 2 : 2 : 2 :	355 N. 3 2 2 2 2	M1. 5 2 2 2
	20.000		-RU -S5 -51 -5		-22 3 15 16 15	-21 16 1d 10	-78 -52 -10 -5	-// 5 15 16 15	-14 / 16 17 16	- In H I7 1d 1b	-// -55 -50 -5	-21 4 16 17	-17 5 16 18	-18 0 16 18	-79 -55 -51 -6	-25 4 15 10	-21 5 15 17 15	-20 6 15 17	-79 -51 -50 -5	-72 3 14 16 15	-20 6 15 17 16	- 1v / 10 1d	5 5 2 2	24 5 5 2 2 2	48 N. 5 2 2 2 2	HI. 5 2 2 2
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			-77 -54 -54 -10	-21 -3 -11 -15 -16	-1, 1, 10 10	-1н 5 12 10	-// -52 -10 -6	-21 5 14 15	- 19 7 15 17	- In n 16 17	-76 -55 -51 -5	-20 5 14 16	- 1d 5 15 17 16	-17 5 16 18	-77 -52 -51 -6 10	-21 5 14 16	- 19 0 15 16	-18 7 14 17	-77 -55 -51 -6 10	-20 ·	-19 6 14 17	-1# 7 15 17	2 2 2 2	17 5 5 2 2 2 2 2	91 %.5 2 2 1	*1. 5 2 2
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		-50.5 -56.5 -66-5 -21.2	80U45 -62 -55 -54 -12	-0 - 5 9 9	-5 -7 11	-2 5 9 12 12	-01 -57 -44 -1R -1	-0 0	-7	-1 4 7	-5H -54 -4H -25	-1 -5 -5 -2 -1	1 5 -1 0 1	2 1 1 2 2	-57 -52 -45 -19 -2	-1 -0 2 2	1 7 2 5 5	7 9 5 6 6	-60 -55 -44 -18	-5 2 1 5	-1	8 9	5 5 5	5 5 5 5 5	50 N.	5 5 5 4
	ADELATOR 55.000 40.000 10.000 20.000 10.000	-50.5 -50.5 -46.5 -21.2	-64 -55 -56 -11	-d 2 6 10	-5 4 8 12 12	-4 6 10 15	-65 -57 -42 -16	-1 -0 2 5	- t- 2 t- 4	-5 4 5 8	-60 -54 -45 -21	- 5 - 0 - 0	-1 5 5 2 3	0 7 4 4 4	-60 -52 -45 -17	- 4 4 4	-1 7 4 7	-0 9 5 8	-62 -54 -42 -16	-5 2 2 5 5	-2 6 5 R A	-1	14 5 5	111 4 5 5	42 14.4 4 14 14 8 8	11. 5 5 5
	ADELATOE 53.000 40.000 30.000 20.000	-56.5 -56.5 -44.5 -21.2 - 4.6	-64 -55 -57 -17	-H	-5 4 A 11	-4 5 9 12 12	-65 -56 -45 -17	-6 1 1 4	- 4 1 5 7	-2 5 5 8 7	-54 -54 -47 -27 -5	- 5 - 2 - 1 - 0	-0 5 0 1 2	1 7 2 5 5	-54 -55 -44 -1d -7	-2 4 1 3 5	-0 ! 5 5	1 0 4 6 7	-61 -54 -45 -17	-5 2 1 4	-2 6 4 7 7	- H 6 9 9	14 16 5 5 5	5 5 3	28 No.1	11. 5 5 3 5
	• () D   F F	FRENILE	Re I mi	- 1 N	· MIT								BEDA			* A. T.				MARKE						

+D--DIFFERENCE BEINELN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

CHARLET LAMBERATINES AND STANDARD DEVIATION IN OEGREES CELSIUS FOR GREAT CIRCLE AIR ROUT		AND STANDAND DE	FULLITON IN	OFGREES CELSIUS	FOR	GREAT	CIRCLE AIR R	DUTE
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_			ENAUU	1E 1	EMPE	RATUR	ES A	ND S	IAND	ARD E	EVIA	1104	IN	DEGRE	ES C	FLSIU	S FO	R GR	EAT C	IRCL	EAI	R RO	O.F.?		
	HLIGHT								Ł!	NK DU	E	JUL	ERATI	UHE		OCTOB	F			ANNU	IAL				PIATION
	IN FEE1	15A 1EMP.	50+	JANU 050	ARY 075	085	50	APR 050		Des	50		075	085		050 0		85		50 0		85	JAN /	PR J	UL OCT
_	ADEN TO 53,000 40,000 50,000 20,000 10,000		-73 -54 -37 -11				-75 -55 -56 -9	-16 la 10 12 13	- 14 · · · · · · · · · · · · · · · · · ·	- 1.5 H 15 15	-75 -49 -27 -3 16	- 18 8 17 18 20	- 16 · 9 · 19 · 19 · 19 · 22	-15 10 20 20 22	-75 -55 -55 -7	-1d - 5 11 14 13	16 - 5 13 15		-8	17 -	15 - 7 14 16	14 8 16 17	3 3 3 2 2	107	5 N.MI. 3 3 3 2 2 3 2 2 2 2
	ADEN 1D 53.000 60.000 30.000 20.000 10.000	8E1RU1 -56.5 -50.5 -44.5 -21.2 - 4.6	-71 -54 -59 -12	-15 5 9	-15 5 7 10	-12 6 8 11	-/1 -53 -36 -10	- 14 5 9 11	-12 6 11 15	-11 7 11 15 16	-74 -49 -27 -4 15	- 17 - 17 - 16 - 20	-16 9 19 17 21	-14 10 20 20 21	-75 -54 -54 -8 -8	-17 - 5 10 13 13	14 - 12 14		-12 - -5? -54 -9	10 10 15 13	13 - 13 15 16	12 8 15 16 17	3 3 2 3	1 36 3 5 2 3	3 3 2 2 2 2 2 2 2 2
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	ADEN TO 55,000 40,000 50,000 20,000 10,000		-75 -54 -58 -11	-16 3 6 10	-14 5 8 12 12	-15 0 9 12 12	-72 -55 -56 -9 7	- 16 3 10 12 12	-14 6 12 14	-13 7 12 14 14	-75 -49 -27 -4 15	-18 7 17 17	-16 9 18 17 21	-15 10 19 19 21	-74 -53 -33 -7 9	-18 - 3 11 14 15	- 16 - 5 15 15 15	- 15 5 14 16 15	-75 - -52 -55 -8	17 · 11 13 14	6 14 15 16	-15 7 15 17	3 5 2 2 2 2	3 2 2 2	5 NoM1. 3 3 2 2 2 2 2 2 2 2
	ADEN TO \$3,000 40,000 50,000 20,000 10,000	CDLOM: -56.5 -56.5 -44.5 -21.2	-80 -55 -51 -5 10	-25 2 14 16	-22 3 15 17 15	-21 4 16 18	-74 -52 -30 -6	-22 5 14 10	-19 7 16 17 10	-18 A 17 18 16	-77 -52 -30 -4	-21 4 15 17 16	-19 6 16 i8 17	-17 17 19 18	-80 -55 -51 -6	-25 5 15 16 14	-21 5 15 17 15	-20 6 15 17 16	-79 -53 -30 -5	-22 14 16 15	-2C 6 16 17 16	-19 7 16 18 17	3 3 2 2 2	3 2 2 2 2	0 N.M1. 3 3 2 2 2 2 2 2 2 2
	A0EN 10 55,000 40,000 30,000 20,000 10,000	DHAH4 -56.5 -56.5 -46.5 -21.2	-74 -54 -56 -9	-18 3 9 12 12	-16 4 11 15 15	-15 6 12 14	-75 -52 -55 -7	-18 11 14	-16 7 15 15	-15 H 14 10	-75 -50 -27 -4 10	- 19 7 17 17 20	-17 9 18 19 21	-16 10 19 20 22	-76 -55 -52 -6	-20 5 12 15 14	-17 5 14 16 15	-16 6 15 17 16	-75 -57 -52 -7 10	-19 12 15 15	-17 7 15 17	- 15 H 16 16 IB	5 5 3 2 2	5 5 2 2	3 5 2 2 2 3 2 2 2 2 2 2
	ADEN 10 51,000 40,000 50,000 20,000 10,000	-56.5 -56.5 -44.5	-12 -54 -59	-15 5 7	5 7	5	-71 -54 -55 -10	3	-12 5 11 15	12	-/4 -49 -28 -4 14	-18 7 17 17 19	-15 V 18 19 20	-15 10 19 19 21	-75 -54 -54 -9	-17 5 10 15	-15 12 14 14	-14 5 13 15 15	-75 -55 -54 -8	-16 10 15	-14 6 13 15 15	-15 7 15 16 17	5 5 2 2 5	2 2 2	3 3 2 2 2 2 2 2 2 2
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ENHOUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSTUS FOR GREAT CINCLE AIR ROUTES

			LNHOL	/11 ·	1646	RATU	HES !	INU S	STAN	ARU	DE VIA	110	4 1N	DE GR	LES	LLSI	US I	OH G	REAL	CINC	LE A	14 4	OUTES			
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CHROUTE	1EMPERATURES	AND	STANDARD	DEVIATION	IN DEGREES	CELSIOS	FILE	COCAT	 	

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ENRUUTE TE	MPERATURES AND	STANDARD	DEVIATION IN	DEGREES CELSIUS	FOR GREAT	CIRCLE AIR ROUTES
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	ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES  GH1																								
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ENHOUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

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		AND STANDARD						ALE BOULES
ENDINITE	LMUIMATINES	AND STANDARD	OF UTABLOW	IN DEGREES	CLISIUS	FOR GREA	I LINCLE	AIR KUUIES

	ENROUTE LEMP	ERATU	RES AND								ELSI	02 F	OR GI	REAL	CIRC	LE A	IR R		
4c   HT   154	JANUARY			PRIL	NHOU		JUL	PRATI		1	0010		]	40	ANN				#0 0E414110M
1 1 1EPP.	50+050 075	UAS	50 05	0 0/5	085	50_	050	0/5	085	50	050	075 (	142	50	050	075 (	763	JAN A	
AYCHORAGE 10 1 55,000 -56.5 44,000 -56.5 50,000 -44.5 20,100 -21.2 10,000 - 4.6	-60 -5 0 -5H -2 2 -56 -12 -7 -56 -14 -11	- d - v	-68 -67 -52 - -55 -1 -16 -1	2 -4	12 15 -5 -7 -8	- 44 - 45 - 20 - 5	15 11 -1 1	14 14 2 3	15 15 5 5	-55 -52 -51 -50 -15	-6		7 0 -5 -6	-51 -51 -51 -50 -15	5 -7 -9	•	10 12 -1 -2	5 6	5846 N.MI. h 2 5 5 h h h 5 h 5 5 5
ANCHORAGE 10 4 55,300 -50.5 40,000 -50.5 30,000 -81.2 20,000 -81.2 10,000 - 4.0	-54 -2 2 -57 -1 5 -57 -12 -10 -57 -16 -12	-H -11	-47 1 -48 -52 - -55 -1	6 11 8 -5 5 -10	14 15 -5 -8 -10	-44 -45 -40 -21 -6	15 11 -1 -0 -1	14 14 1 2	15	- 51			8 10 -4 -5	-50 -50 -52 -51		10	11 12 -2 -5	5	2928 N.MI. 4 2 3 5 4 4 5 5 4 5 5 4 5
ANCHORAGE 10 4 51.000 -50.5 40.000 -50.5 50.000 -44.5 20.600 -21.2 10.000 - 4.6	-50 -5 1 -50 -1 5 -50 -11 -0 -55 -14 -10	-7 -0	-68 -69 -52 - -55 -1 -16 -1	2 -4	15 15 -5 -6	-46 -46 -45 -20 -5	12 11 -1 -1 -0	16 16 2 5 2	15 15 5 4	-55 -52 -51 -20 -14	-6 -8 -10		7 -2 -5 -5	-51 -51 -51 -29 -14	5 -6 -8		10 12 -1 -2 -5	5 6 5 6	3886 N.MI. 4 2 5 5 5 4 4 5 4 5 4 5 5 5 5
AMCHORAGE 10 1 51,300 -50.5 40,000 -50.5 30,000 -40.5 20,300 -41.2 10,000 -4.6	-55 2 6 -56 2 6 -55 -6 -6 -52 -11 -7	-4	-55 -50 -27	5 7 6 -5 5 -2 0 -5	-2 -0 -1	-51 -52 -42 -15	5 5 5	8 6 5 8	10	-55 -54 -47 -25 -7	2 5 -3 -2 -3	0 2	5 8 1 6 5	-55 -55 -46 -24	5 5 -6 -5	-0 -0	9 2 5 2	6 6 7 7	2181 N.HI. 4
54CHCHAGE 10 51,000 -56.5 10,000 -56.5 10,000 -66.5 20,000 -24.2 10,000 -24.6	-55 2 6 -54 2 7 -54 -4 -7 -55 -14 -10	-5 -7	-52 -51 -		10 10 -5 -2	-69 -50 -65 -17 -2	2	10	11 11 5 e 7	-54 -52 -44 -25 -10	5 -4 -4 -5	5 8 -1 0 -1	7 10 0 2	-52 -52 -49 -26 -12	5 -5 -5	7 6 -1 -1	10 1 2 -0	6 6 7	2711 N.HI. 4 3 4 5 5 5 4 4 6 5 4 6
ATCHUMAGE 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-55 1 5 -56 7 6 -55 -7 -6 -55 -12 -8	>	-27 -	5 7 4 8 6 -5 6 -1	0 10 -2 -1 -5	-51 -51 -42 -16 -0	5 5	A A 5 B 7	10	-55 -55 -67 -25	-5 -2 -1	0 2	5 0 1 4 5	-55 -55 -46 -25 -10	- 4 - 4 - 5	-0 1	2 5 1	5 6 7	2055 N.MI. h
A SCHOMAGE 10 ( 55.00 -56.5 40.00 -56.5 55.100 -44.5 2-100 -24.2 10.00 -4.6	-54 -5 1 -58 -2 2 -56 -11 -4 -55 -14 -10	-7 -0	-6M -49 -52 -1 -52 -1	8- 1	12 15 -4 -6	- 66 - 65 - 20 - 5	12 11 -1 -1	14 2 5 2	15 15 5	-55 -52 -51 -20 -14	5 4 -6 -8 -9	6 7 -6 -6	-2 -5 -6	-51 -51 -51 -24	5 -6 -H -7	8 -5 -4 -5	10 12 -1 -1	5 6	4000 N.MI. 4 2 3 5 5 4 4 5 4 5 4 5 5 5 5
AV(+0+Aur 10 55,000 -50.5 40,000 -50.5 50,000 -44.5 70,100 -21.2 11,00 -4.6	-55 5 7 -54 2 7 -51 -6 -4 -24 -6 -4	-/ -1	-27 -	5 H 6 -2 6 -7	10 16 -1 -0	-50 -51 -65 -16	7 5 1 5	9 9 8 6	10	-54 -53 -47 -24	-2 -2 -5	0 1 0	2 5 2	-52 -55 -46 -24	-5 -5 -6	7 7 0 2 0	2 4 2	57	1255 NoH1. N 5 4 5 5 5 3 4 6 5 4 5 N 5 5
ANCHORAGE 1U 51,300 -50.5 43,300 -50.5 50,300 -60.5 23,300 -21.2 10,309 -21.2	-5v -2 2 -57 -1 3 -56 -11 -v -55 -16 -10	-7	-44 -47 -51 -55 -1	12 -8	15 11 -2 -6 -H	-44 -46 -45 -21 -5	12 11 -1 1	14 14 2 5	15	-52 -52 -51 -24 -14	5 -6 -8 -10	6 -4 -5 -1	7 10 -2 -5	-24	-6 -8 -10		11 12 -1 -2 -5	5	5720 N.HI. 4 3 5 5 5 4 6 6 5 5 5 5
AYCHO*AUP 10 >5,000 ->6.5 40,400 ->6.5 10,000 -46.5 20,000 -21.2 10,000 - 6.6	-50 -1 5 -57 -0 6 -57 -12 -10 -57 -17 -16	6 -H -12	-47 -49 -55 -55 -1 -20 -	15 -10		-44 -45 -45 -21 -5	12 10 -1 1	14 15 1 5		-51 -51 -52 -31			10 -5 -5	-50 -51 -52 -51 -17		10	11 12 -2 -3	5	2546 N.HI. h 2 5 5 5 4 h 5 4 5 4 5 5 4 5
ANCHOMAGE 10 55,000 -50.5 40,000 -50.5 50,000 -44.5 20,000 -21.2 10,000 - 4.6	-49 / 11 -52 5 H -51 -7 -4 -50 -9 -5	10 -2 -5	-26	6 V 5 V -6 -1 -5 -2 -8 -4	10 11 0 0	-51 -44 - 58 -12	5 7 7 9 7	6 11 10 11	15 12 13 10	-52 -52 -40 -24 -9	5 -1 -2	7 8 1 1	B 10 5 5	-51 -51 -46 -23 -9	5 -1 -2 -4	9 9 5 5	12	5	5005 N.HI.
A4CHORAGE 10 55,000 -50.5 40,000 -56.5 50,000 -44.5 26,000 -21.2 10,000 - 4.6	-54 -3 ( -58 -2 2 -56 -11 -1 -55 -14 -1(	-7		11 -8	- 5	-44 -46 -45 -20	12 10 -0 1	14 15 2 4	15	-55 -55 -51 -20 -14	-6	5 7 -4 -6	6 R -2 -5	-51 -52 -51 -29 -14	5 -6 -8 -9	9	10 11 -1 -1	5 6	4201 N.MI. 4 2 5 5 5 4 4 3 4 5 5 5
898446 10 ATH 51,000 -50-5 40,000 -56-5 50,000 -44-5 26,000 -21-2 10,000 - 4-6	-57 -1 : -56 0 -50 -5 - -24 -5 -(	5 -2	-51	-0 2 -0 5 -1 1 2 4 2 5	5	-62 -47 -54 -9	-6 9 11 12	-5 11 15 14 15	-2 12 14 15 14	-61 -56 -41 -15	-5 0 5 6	-2 2 5 8 8	-1 5 6 9	-50 -54 -45 -17	- 5 2 2 4	-0 6 8	1 8 8 10	3	452 N.MI. 5
ANKARA 10 BAG 54,000 - 50.5 40,000 - 50.5 50,000 - 44.5 20,000 - 21.2 10,000 - 4.6	5 -50 -5 -6 5 -56 1 6 5 -4H -4 -6 2 -25 -1	4 5	-55 -44 -18	-2 0 1 5 0 2 5 6 4 7	4	-46	15	12 17 18	- 7 13 16 19 16	-56	0 4 7	- 5 5 6 9	-2 4 7 10 12	-62 -55 -41 -15	- 5 5 4 6	- 2 7 8 10	-1 8 10 12 12	3 4 4	682 N.MI. 3 S 4 5 3 S 5 S S 4 3 S 4 S S

+0--DIFFERENCE HEIMEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

	,	ENROL	11 E	LHP	HAIL	JRES A	INO S	TANO	ARO	0E V 1	1110	6 1N	OFCE	EE5	CELS	105	OR C	REAT	CIR	CLE /	AIR R	OUTES			
HLIGHT									NROU	TE		ERAT	URE									STAN	OARO	OEVIA	TION
FLET	ISA TEMP.	50	JANE		UHS	50	4PR		085	50	050		085	50	050	075	085	50		O75	085	JAN	APR	JOL	007
ANKARA 55.000 40.000 50.000 20.000 10.000	10 BARC -56.5 -56.5 -44.5 -21.2 - 4.6	ELONA -57 -57 -50 -24	-0 -1 -5 -5	3 -3 -0 -1	5 -1 1	-56 -57 -46 -20 -3	0 -1 -2 1	3 1 4	5 2 5	-59 -50 -36 -10	-2 7 8 11	0 V 10 13	1 10 12 14	-60 -56 -62 -16	-4 0 3 6 5	-1 2 5 8	-0	-58 -55 -43 -18	-1 1 1 5	1 5 5 7	3 7 7 9 9	5 5 4 4 4		401 N.	.H1.
ANKARA 55,000 40,000 50,000 20,000 10,000	10 BASE -56.5 -56.5 -44.5 -21.2 - 4.6	-56 -57 -51 -26 -11	0 -1 -6 -5	-4 -2 -3	5 -2 0 -1	-55 -57 -47 -21 -5	-0 -2 0 -0	5 0 5 5	5 2 5 4	-55 -50 -38 -12	? ? 10 8	9 9 12 11	5 11 11 15 12	-50 -56 -43 -17	-\$ 0 2 5	-0 5 6	1 4 6 9 8	-56 -55 -44 -19	0 1 0 2 1	5 6 6 5	6 8 7	5 5 4 5	5 4 4	182 N. 3 4 5 5	.H1.
ANRARA 51,000 40,000 50,000 20,000 10,000	10 FASR -50.5 -50.5 -44.5 -21.2 - 4.6	-61 -55 -47 -22 -6	-4 1 -5 -0	-2 4 -1 2 2	-0 6 1 5	-60 -55 -43 -17	-5 1 1 4 5	-1 5 3 6 8	0 7 5 H	-68 -46 -28 -5 12	-11 10 16 17 16	-9 12 18 19 16	-8 13 19 20 19	-65 -56 -40 -13	-7 1 5 8	-4 3 7 10	-5 8 11 12	-65 -53 -40 -14	-6 3 5 1	-4 7 9 11	-2 9 11 13		5 5 8	921 N. 5 5 5 5 5	. M1 . 5 . 5 . 5 . 5 . 5
44KARA 53.000 40.000 30.000 20.000	10 BEIR -50.5 -50.5 -44.5 -21.2 - 4.0	-54 -56 -49 -25	- 5 1 -4 -2 -5	-0 -2 1 0	1 5 -1 2	-58 -56 -45 -14 -1	-2 1 -0 5	1 4 2 5 6	2 6 5 7 8	-66 -47 -30 -7	-9 10 14 15	-7 12 16 17 15	-6 15 17 18 16	-62 -56 -41 -14 5	-6 0 4 7 8	-3 -3 -9 10	-2 h 7 10 11	-61 -54 -61 -15	-5 3 5	-2 6 8 9	-1 8 10 11	5 4	5 5 6	5 % N. 5 5 5 5 5	. M1 . S . S . S . S . S
ANKARA 55,000 40,000 50,000 20,000 10,000	10 BELE -56.5 -56.5 -46.5 -21.2 - 4.6	-64 -55 -41 -14 -2	-15 1 6 7	-10 5 9	5 6 10	-68 -55 -57 -12	-12 1 7 10	-10 9 11	-9 6 9 12 12	-70 -52 -34 -7 10	-15 5 11 14	-11 6 12 15 16	-10 7 13 16	-71 -55 -36 -9	-14 2 9 12 11	-12 4 10 13	-11 5 11 14 13	-69 -54 -37 -11	-15 2 8 11	-11 4 10 12 12	-10 6 11 14	\$ 4 2 5 5	5 ( 5 4 2 5 5	065 N. 3 2 2 2 2	.H1. 5 5 2 2
ANRAKA 55.000 40.000 50.000 20.000 10.000	10 8046 -56.5 -56.5 -44.5 -21.2 - 4.6	-66 -55 -42 -17 -1	2 2 4 5	-1 5 5	- 5 6 7 1	-65 -54 -57 -15	-d 5 6	-6 6 8 11	-5 8 V 12 15	-71 -47 -27 -3 14	-14 10 17 16 18	-12 12 19 20 20	-10 14 20 21 21	-68 -55 -17 -11	-12 2 8 11	-9 4 10 15	-8 6 11 14 14	-67 -53 -57 -11	-11 8 10 10	-8 8 12 14	10 14 15 15		20 5 8 5	04 N.	. H1.
ANKARA 55.000 40.000 50.000 20.000 10.000	10 mRUS -5.05 -5.05 -4.5 -21.2 -4.6	St L 5 -56 -58 -51 -26 -11	0 1- 7-	-2 -5	- 5 - 0 - 1	-55 -56 -47 -22 -5	0 - 5 -0 -1	-0	6 0 - 4 4	-54 -50 -38 -12	5 7 6 9 8	5 9 11 10	6 11 10 12	-59 -56 -45 -17 -2	-2 0 2 4	0 5	2 4 5 H 7	-56 -55 -45 -19	1 1 -0 2	5 5 4	510	5 5 4 5	5	\$50 N.	. 1M.
ANHARA 54,000 00,000 50,000 20,000	10 8004 -50.5 -50.5 -44.5 -21.2 -4.6	PEST -56 -57 -51 -26 -11	1 -1 -1 -5 -7	-2 -4	-5 -0 -2	-55 -56 -47 -21 -5	0 -2 0 0	0 5 5	5 2 5 5	-55 -49 -57 -11	1 H H H	10 10 12	5 12 11 13 12	-59 -56 -45 -17 -1	-5 0 2 5	-0 5 4 7	1 6 8 8	-56 -55 -44 -14 -5	0 2 0 2 1	5 6 4 6 5	8 6 H 7	5 5 5 5	5 6 5	738 N. 5 4 5 5 5	.H1.
ANARA 55.000 40.000 50.000 20.000	10 CATE -50.5 -50.5 -44.5 -21.2 - 4.6	-61 -55 -47 -21 -6	-5 1 -5 -0 -1	-2 4 -1 -2	-1 6 0	-59 -56 -44 -14	-5 1 1	-1 4 5 0 7	0	-67 -47 -29 -6 10	-11 10 15 15	-9 12 17 17 16	-8 15 16 18	-65 -56 -46 -15	-1 0 4 9	-5 5 6 9	-3 4 7 10 12	-65 -54 -40 -15	-6 5 6 7 7	-4 6 9 10	-2 -8 11 12 11		5 5 3	3 3 5 5 2	. H1
ANKARA 55.000 40.000 50.000 20.000 10.000	10 COPE -50.5 -50.5 -44.5 -21.2 - 4.6	-56 -58 -58 -52 -27 -15	1 -1 -7 -6 -8	-5 -5 -4	5 -5 -1 -2	-54 -55 -66 -22 -6	2 1 -5 -1 -2	5 -1 2 2	6	-52 -44 -54 -15	5 7 6 8 7	10 H 10	8 11 10 12 10	-58 -56 -45 -18 -3	-1 0 1 5	1 5 6 5	2 5 5 6 6	-55 -55 -45 -20 -5	2 -1 1 -0	6 5 5	6 8 5 7 5	5 5 4 5 5	5 4 5 5	29 N.	M1.
51,000 40,000 50,000 20,000	10 UHAH -50.5 -50.5 -44.5 -21.2 - 4.6	-05 -55 -46 -20 -4	-6 2 -1 1	-4s 4s 1 4s 5	- 5 6 2 5 5	-62 -55 -62 -16 2	-5 2 5 5	-5 5 8	-2 7 6 9	-69 -46 -28 -4 15	-1* 10 17 17	-10 12 19 19	-9 13 20 20 20	-65 -55 -59 -12	-9 1 6 9	-6 5 8 11	-5 4 9 12 15	-65 -53 -58 -15	-8	-5 7 10 12 12	-4 9 12 14	3 3	5 5 5 5	5 5 5 5 2	M1.
53,000 40,000 50,000 20,000	-56.5 -44.5 -21.2	-56 -58 -51 -27	-1 -1 -7 -5 -7	2 -4 -2 -4	5 - 5 - 0 - 2	-55 -56 -67 -22 -5	0 -5 -0 -1	-0 3	00133	-53 -50 -58 -12 -5	5 7 6 9	5 10 9 11	/ 11 10 12 11	-59 -56 -43 -17 -2	-2 0 2 4 5	9	24587	-56 -55 -45 -19 -4	1 2 -0 2	5 5 6	5 7 5 7 6	5 5 5	12 5 4 5 5	77 N.	# # # # # # # # # # # # # # # # # # #
55.000 40.000 50.000	-56.5 -44.5 -21.2	-56 -58 -51	-1 -1 -5 -1	2 -4 -2 -5	5 4 - 5 - 0 - 2	-55 -56 -67 -21 -5	0 -5 -0 -1	-0 5	56144	-54 -50 -58 -12	3 7 7 9 8	10 9 11	6 11 10 12	-59 -56 -45 -17 -1	-2 0 2 4 5	0 3 4 7	2 4 5 8	-56 -55 -45 -19 -4	1 2 -0 2	5 4 5	5 7 6 7 6	5 5 5	11 5 4	85 N. 3 4 5 5	MI
53,000 40,000 50,000 20,000	FO GENE -50.5 -50.5 -44.5 -21.2 - 4.0	-56 -57 -51 -26	-5	2 -6 -1 -2	-2	-55 -57 -67 -21 -5	-0 -2 0 0	5 0 5 5	5 2 5 5	-56 -50 -51 -11	10 9	5 9 10 12 11	10 11 15 12	-59 -56 -42 -16 -1	- 5 0 2 5	-0 5 7	1 4 6 9 8	-51 -55 -44 -19	-0 1 0 5	5 6 5	7 6 8 7	5 5 5	12 6 5 6	26 N.	H1.

10.000 - 6.6 -10 -6 -2 -1 | -5 0 5 5 | 6 9 11 12 | -1 6 7 8 | -5 2 5 7 | 5 6 5 6 -0 -- DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

THE BOLING COMPANY TRANSPORT DIVISION

NO. 06-7177 PAGE 29

A MUNICIPAL PRINCIPAL PROPERTY	AND CLASSIAND D	CULATION IN DEC	CALLE CELCINE FOR	GREAT CIRCLE AIR HOUTES

	LNRUU	IE I	EMPE	KATU	KE2 W	NO S	TAND	ARD	DEAIN	11101	IN	DEGR	tts t	.ELSI	172 1	UK 6	REAL	CIRC	LE	IIK K	OULEZ	
HEIGHT IN 15A FLET TEMP.		JANU D50		DHS	50	APR 050		NROU OHS		JUL USO	٧		50	0C T 0	61 R	085	50	ANN D50	UAL D75	DHS	STANC	ARD DEVIATION APR JUL OCI
Ankida 10 151A 54,000 -56.5 40,000 -56.5 50,000 -44.5 20,000 -21.2 10,000 -4.6	NBUL -57 -57 -51 -25 -10	-0 -0 -6 -4	5 -4 -1 -2	-3 -0 -1	-56 -56 -46 -20 -1	0 -1	5	6 0 0	-60 -47 -54 -7	-4 9 10 12	-1 11 15 14	-0 12 14 15	-60 -56 -42 -15	- N	-1 ? 5 8	-0 4 6 9	-58 -54 -45 -17	-2 2 1 4	1 6 5 7 7	\$ 8 8	5 5 4	197 N.MI. 5 5 4 5 3 5 3 3 3 4 3 5 4 5 4
ANNARA 10 LUND 55,000 -50,5 40,000 -64,5 10,000 -44,5 20,000 -21,2 13,000 -4,6		0 -1 -0 -5	-4 -2 -3	-2 0 -1	-55 -56 -47 -22 -5	2 - 3 - 0 - 1	-0 5 2	0 0 1 4 4	-55 -50 -54 -12	5 6 9 8	8 11 10	7 11 10 12	-5v -56 -45 -17	-2 0 1 4	0 5 6 7 6	2 5 H	-56 -55 -45 -19 -4	1 -0 2	5 3 5 4	57	5 4 5 5	1538 N.M1. 4 5 4 5 4 4 6 4 5 8
816848 10 F80H 551000 -76.7 60.000 -76.5 50.000 -86.5 20.000 -8.6	-57 -57 -67 -69 -26	-1 -1 -5 -1	5 1 -2 0 -0	5 -1 2 2	-50 -57 -40 -20 -5	0 -1 -1 -2 2	3 5 1 6 5	5 2 6 6	-59 -50 -57 -10	-2 6 8 11	0 9 10 15	1 10 11 14	-60 -56 -42 -15	0 5	-2 3 5 8	-0 4 7 9 9	-58 -55 -45 -17 -1	-2 1 1 4	5 7 7	5 7 9 V	5 6 6	1601 N.M1. N 5 5 S N N N 5 N N 5 S
ANKARA 10 PUSC 55:000 -50:5 40:000 -50:7 50:000 -64:7 20:000 -21:2 10:000 - 4:6	-56 -56 -52 -26 -15	- u - u - o - o	-5 -1 -5	1 -4 -1 -5	-54 -55 -67 -21	5 1 -2 -0 -1	5 1 5 5	6 7 2 5 5	-51 -48 -55 -12	5 H 7 9	11 10 11	12 11 12 10	-57 -55 -45 -18 -5	-1 1 1 5	2 4 6 5	3 5 8 6	-54 -54 -45 -20 -5	2 -1 1 -0	5 6 4 5 5	6 7 5	5 %	900 N.MI. 5 5 4 5 4 4 5 5 5 5 5 5
AYARK TO MURUI 55,000 -56.5 40,000 -56.5 10,000 -44.5 20,000 -21.2	-55 -57 -51 -50	-0 -8 -7	-0 -5 -1	5 -6 -1	-52 -52 -47 -21 -7	-2 -1 -1	7 H 1 2 1	10 2 4	-50 -68 -56 -10 -5	6 4 11 11 10	9 12 14 16 12	11 14 15 15	-54 -55 -45 -20 -6	2 5 -0 1 -1	5 7 5	5 6 5	-52 -52 -45 -21	-0 0 -1	5 5 5	0 11 8 8	5 5 6	\$895 N.MI. N. N. N. 5 5 5 5 5 5 5 4 5 5 4 5
8 45 8 8 1 5 5 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		- 15 2 0 10	-11 -4 -11 11	-12 3 8 12 12	-/1 -55 -55 -10	-14 5 7 12 11	-12 -6 11 15	-11 / 12 14	-71 -50 -27 -5	-17 7 15 17	- 15 - 8 - 17 - 18 - 18	-14 v le lv ls	- 7 5 - 5 5 - 5 4 - 6 H	-16 5 11 15	-14 -5 12 14 14	-13 -5 -13 -15 -15	-72 -51 -54 -8	-16 4 10 15 12	-15 6 15 15	-12 7 14 16 15	5 3 2 2 5	2496 N.MI. 5 5 1 4 2 2 2 2 2 2 2 2 2 2 2
A+KAKA 10 PA41 75,000 ->0.5 6,000 -46.5 50,000 -46.5 20,000 -21.2 10,000 - 4.6	5 -50 -50 -51 -76 -11	- 1 - 0 - 5 - 6	-4 -2 -1	5 -2 0 -1	-55 -57 -47 -21 -5	-0 -0 -0	1 0 5 5	55-56	-54 -50 -54 -12	2 6 7 9	9 11 10	6 11 16 12	-59 -56 -41 -17 -1	-2 0 2	5	1 6 8	-56 -55 -45 -17 -1	0 1 -0 2	5 6 5	5 6 8 7	5 5 5	1596 No.M1. h 5 h 5 h 4 h 6 h
A 4KAKA 10 WUME 55,000 -56.5 40,000 -56.5 12,000 -44.5 21,000 -21.2 10,000 - 4.6	-50 -57 -50 -25	-0 -6 -5	5 -5 -1 -7	5 -2 -0	-50 -57 -46 -20 -3	-1 -2 -2 1	5 1 6	5 2 5	-54 -44 -16 -10	-2 H H 11	-0 10 11 15	1 11 12 14 15	-60 -56 -42 -15	0 5	-1 2 5 A	-0 4 6 9 9	-58 -55 -44 -18	-1 2 1 5	5 7 6	\$ ! ! Y	5 5	927 N.MI. 5 5 5 5 5 5 4 5 5 4 5 5 4 5 5
5 ** 6 * 6 * 10 * 5 10 C * 5 1	**************************************		3 -5 -1 -5	5 -4 -1 -1	-54 -55 -46 -25 -7	\$ 2 -6 -2 -2	5 -1 2 1	/ / 1 6	-51 -67 -59 -15	6 7 5 8	10 8 10 8	12 V	-5/ -50 -44 -17	-1 1 0 5	3 6	5 4 7	-54 -54 -40 -21 -6	2 -1 0 -1	5 6 5	1 0 5 0 5	5 5 6	1501 N.MI. 1 5 4 5 4 4 6 4 6 5 5 5 6 5 5
ANHAMA 10 11HE 55,000 =50.5 60,000 =50.5 50,000 =46.5 20,000 =21.2 10,000 = 4.0	-54 -56 -49 -25 -8	-2 -4 -2 -3	-> 0 0	> 5 -1 -2 2	-58 -55 -66 -18 -1	-1 C 1	1 5 5 6 7	2 1 4 7	-55 -46 -10 -6	-H 10 15 16	-6 12 17 18 17	-5 13 18 19 18	-61 -56 -41 -15	-5 0 5 7 H	-2 5 6 7	-1 4 7 10	-61 -53 -41 -15	- Is 5 Is 6	-1 7 8 10	0 9 10 12 12	5	905 NoME   5
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. D.--DIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

_			ENKUL	JIE	EMP	HAIL	INES	AND	SIAN	OAK!)	OFAI	A 1 1 0	N IN	DEG	EES	CELS	105	FOR (	GREAT	CIAC	LE	AIR R	OUTES			
	HL [GH]									ENKOU	1 E		PEHA	LUNE									STAN	DARD	DEVIAL	ION
	FIEL	154 1tmp.	50+	DY0		085	50		075	085	50		075	085	50		DIS		50	D50	DIS	085	JAN	APR	JUL (	OC T
	#N11GUA 51.000 40.000 10.000 23.000 10.000	10 BAR -50.5 -36.5 -44.5 -21.2 - 4.6	-77 -54 -54 -7		-14 -2 12 15	-18 6 13 16	-76 -54 -11	-21 5 17 16 15	-10 h 15 16	-19 5 16 16	-/5 -55 -56 -7	-16 1 11 14	-15 2 12 15	-14 5 12 16 15	-11 -56 -52 -6	-20 5 15 16	-19 6 14 17 15	-18 4 16 17 15	-16 -56 -55	-20 2 11 15	-17 6 15 16	-16 15 16 15	5 5 2 2 2	2 2 2 2	279 No.1	#1. 3 2 2
	ANTIGUA 51,000 40,000 50,000 20,000 10,000	10 BER -56.5 -50.5 -44.5 -21.2 - 4.6		-16 1 7 11	-15 3 8 12	~14 5 V 15	-72 -56 -57 -10 5	-15 0 8 12 10	-15 2 9 15	-12 5 10 16 17	-10 -56 -56 -7	-15 0 10 16	-12 1 11 15	-11 2 12 16 16	-76 -55 -56 -7 8	-17 2 11 14	-15 5 12 15	-14 4 15 16	-17 -56 -56 -9	-16 1 9 15	-16 3 11 16 12	-15 4 12 15 15	3 3 3 2 3	5 5 2 2 2	925 N. 0 2 2 2 2	2 2 2
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	ANTIGUA 55.000 NO.000 30.000 20.000 10.000		MIE A -77 -54 -57 -4			-17 6 12 15	-11 -56 -15 -1	-21 2 11 14	-19 6 12 15	-14 5 15 16	-72 -56 -56 -7	-16 1 11 16	-16 2 12 15 16	-14 5 12 16	-77 -56 -52 -6	-20 5 12 15	-16 16 16	-17 6 16 17 15	-16 -56 -55 -1	-19 2 11 14 15	-17 3 12 16	-16 15 16 15	\$ \$ 2 2 2	3 2 2 2 2	55 Not 2 2 1 1	3 2 2
	ANTIGUA 51.000 60.000 50.000 25.000 10.000	10 \$1. ->0.5 ->0.5 -+4.> -21.2 - 4.0	-76 -76 -35 -8		-1d	-17 6 12 15	-11 -36 -55 -1	-26 2 11 16	-14 12 15 16	-17 5 15 16 19	-12 -50 -54 -1	-16 1 11 16 15	- 14 2 12 15 14	-14 5 12 16 15	-11 -56 -52 -A	-20 5 12 15	-16 15 16	-17 6 16 17 15	-75 -56 -56 -7 6	-19 2 11 16 15	-17 3 12 15	-16 15 16	5 5 2 2 2	5 2 2 2 2	176 No.H	1
	44UHA 11 55.000 50.000 20.000 10.000			-21 5 11 15	-19 6 12 16 16	-1v 5 15 17 15	-78 -52 -51 -5	-21 15 16	-14 6 15 17	-1v 6 15 16 16	-15 -55 -5! -1	-17 1 12 16 16	- 15 - 15 - 15 - 15	-14 5 15 16 15	-11 -5a -51 -6 10	-21 5 15 16	-19 8 16 17 15	-1R -15 17 1A	-76 -54 -52 -6	-20 5 12 15 16	-18 16 17 15	-17 5 14 17 15	\$ 2 2 2 2	2 2 2	211 4.4 2 2 2 2 1 1	1 1 1
	44084 TO 55.000 40.000 50.000 29.000 10.000	*1905 ->6.5 ->6.5 -46.5 -21.2 - 4.6		-21 5 16 14	-17 12 15 14	-16 5 12 16 15	-77 -55 -52 -6	-26 12 15 15	- 19 5 15 16	-16 5 14 17 15	-/5 -56 -55 -/	-16 1 11 14 14	-15 -2 -12 -15 -15	-14 5 15 16	-11 -54 -52 -6	-21 5 15 16	-19 6 16 14 15	-18 16 17 15	-10 -54 -51 -0	-20 2 12 15 15	-17 h 15 14	-1e 5 15 16 15	5 5 2 2 2 2	5 2 2 2 2	5 10 N. F 2 2 1 1	11
	ARUSA TO 51.000 40.000 10.000 20.000 10.000	) MARAC. -50.5 -50.5 -44.5 -21.2		-21 -3 -11 -15 -15	-14 12 16	-1e 5 13 17 15	-76 -52 -51 -5	-21 6 11 10	-14 6 15 17	-18 6 15 18	-75 -55 -51 -7	-17 1 12 16 16	-15 2 15 15	-14 3 13 16	-11 -54 -11 -6 10	-21 5 15 16	-19 6 16 17 15	-18 4 15 17	-16 -54 -52 -6	-20 5 12 15	-18 6 16 17 15	-17 5 16 17	3 2 2 2 2 2	2 2 2 2	14A N.H 2 2 2 2 1	3 2 1 1
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	ASUNC 10* 51,000 40,000 50,000 20,000 10,000	-56.5 -56.5 -44.5 -21.2	-/6 ·		12	-16 6 15 17	-/5 -55 -55 -6	-19 5 12 15 15	-17 	-16 6 19 17 15	-71 -5% -55 -6	-16 2 11 15	-12 6 15 14	-11 5 15 15	-76 -56 -52 -6	-17 5 15 15	-15 4 14 16	-14 5 15 17 15	-76 -56 -55 -7 -8	-17 -5 12 16 15	-15 5 15 16	-15 6 16 16	5 5 2 2 2 2	5 5 2 2 2 2	480 N.M 3 2 2 2 2	3 2 2 2 2 2
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	ASUNC 100 55.000 40.000 50.000 20.000 10.000	-56.5 -56.5 -44.5 -21.7		-11 -1 12		-7 8 11 15	-67 -55 -58 -18 -12 -5	-10 2 7 10 10	~/ 5 4 12 12		-61 -52 -42 -18 -0	-6-5-7-6-6	-1 / 5 6	0 9 6 7 7	-67 -56 -17 -11	-5 5 7 10 R	-2 5 10 12	-1 7 11 14	-64 -55 -59 -12	-8 5 6 7	-6 6 9 12 11	-2 6 10 13	5 5 5	5 5	576 N.M	11 . 6 6 5 5

10.000 - 4.6 B 15 15 16 5 10 12 15 -0 4 6 7 4 R 10 11 4 9 11 15 5 5 5

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

		ENROU	TE T	ENPE	RATUR	ES A	NO S	TAND	ARD I	DE V I A	TIDN	5 N	DEGRI	ES C	ELSI	US F	DR GI	REAT	CIRCI	E A	RRO				_
HE IGHT									NRDU	E	TEMP	ERAT	UME		OCTO	AFT			ANNU	FAL		STANO	ARD DEV	LATIO	
FEET	ISA TEMP.		JANU. D50			50	APR DSU	075	D85	50		075	D85			075	085	50	050 E		85	JAN A	PR JU	DC.	_
A SUNCI DN 5 3, 000 40, 000 50, 000 20, 000	70 C4 -56.5 -56.5 -44.5 -21.2	-64 -54 -59 -51	N -/ 3 6 10 10	-6 6 8 17 17	-5 ? 9 16 15	-65 -56 -54 -14	-1 1 6 7 8	- 4 4 10 10	-5 5 9 11	-58 -52 -64 -19 -2	-1 6 0 2 5	2 / 3 5 5 5	5 6 6	- 60 - 54 - 60 - 14	-5 5 6	-0 6 7 10 7	1 7 9 11 10	-61 -54 -40 -14	-5 5 6 7 7	-1 6 7 10 9	8 6 11	5 6 5	3		
0.000 30.000 20.000	10 C4 -50.5 -56.5 -44.5 -21.2 - 4.6	-77 -53 -57 -57 -5	-20 5 12 16	- 16 5 16 18	-57 6 15 18 16	-76 -52 -51 -5	-14 5 15 16	-17 7 15 17	- 56 8 16 18	-71 -53 -33 -9 7	-14 3 12 17 12	- 12 - 5 - 15 - 15 - 15	-11 6 14 14	- /5 - 54 - 51 - 6	-17 5 15 15	- 15 15 16 15	-14 5 15 17	-74 -55 -57 -6	-16 - 3 15 15	- 15 - 6 14 17 15	15 15 17 16	3 3 2 2 2 2 2	3 2 2 2	3 2 2 2	3 2 2 2 2
\$0.000 \$0.000 20.000	10 Da -50.5 -50.5 -44.5 -21.2 - 4.6	-77 -55 -55 -55	-20 3 12 15	- 16 5 15 17 15	-17 0 16 17 16	-/6 -55 -51 -6	-20 6 15 15	-18 6 15 17 15	- 17 6 16 17	-71 -53 -33 -8	- 15 - 3 - 12 - 13 - 12	-15 5 15 15 15	-11 0 16 15	- 74 -55 -52 -6 10	-18 -5 -15 -15 -15	- 16 5 14 16 16	- 15 6 15 17 16	-15 -53 -52 -7 9	- 18 - 3 12 15	6 14 16 15	- 1a 7 15 17 10	3 5 2 2 2	2 2 2	5 2 2 2 2	3 2 2 2 2
10.000 10.000 20.000	10 H -56.5 -56.5 -44.5 -21.2		-20 5 12 16	-14 5 11 17	-17   0   14   16	-16 -52 -52 -5	-19 h 15 16	-17 6 14 17 15	-16 7 15 18 16	-72 -54 -55 -8	- 15 2 11 13 12	- 1 5 ts 1 5 1 ts	-12 5 14 14	-/4 -54 -52 -6	-18 3 15 15	-16 14 16 15	-15 5 15 17 10	-75 -53 -57 -6	-18 - 3 12 15 13	- 16 - 5 - 5 - 16 - 15	-1% 6 15 17 15	5 5 2 2 2	5 2 2 2	5 2 2 2 2	2 2 2 2 2 2
10,000 20,000	- 10 H - 50.5 - 50.5 - 44.5 - 71.7			-18 4 12 16 15	-17 5 13 17 15	-15 -51 -15 -6	-14 12 15 13	-17 6 15 17 15	-10 / 14 1/ 10	-72 -54 -15 -8	-15 2 12 15	-15 6 15 14	-12 -6 -16 -15 -19	-75 -54 -52 -5	-16 2 12 15 14	-16 14 16 15	-15 15 17 10	- 14 -54 -55 -7 0	-18 - 3 - 12 - 15 - 15 -	- 16 5 15 16 15	-14 6 14 17 15	5 5 2 2 2	5 2 2 2 2	? ? ?	2 2 2 2
10.000 10.000 20.000	-50.5 -50.5 -50.5 -44.5 -21.2	-74	-1d 12 15	-15 / 16 17 15	-14 6 15 18 16	-/5 -55 -54 -/	-1/ 6 11 14 12	-16 0 13 15	-15 M 16 16	-67 -52 -36 -12	-11 5 9	-6 / 11 11	-7 6 12 12 11	-66 -56 -16 -6	-11 -5 -11 -15 -12	-9 5 15 15 16	- 0 14 15 14	-71 -51 -54 -6	-14 4 11 15 12	- 11 6 15 15	-7 14 16 15	5 2 2	795 5 5 2 2	5 5 5 2	5 5 2 2
10.000	10 L -50.5 -50.5 -44.5 -21.2	-15 -52 -32	-16 12 15	16 6 14 17 15	-14 8 15 16	-/4 -55 -55 -7	- 16 6 11 16 15	-15 6 15 16	-14 # 14 17 15	-68 -52 -15 -11	-12 4 10 10	-9 6 12 11	-6 7 13 12 12	-64 -54 -53 -8	-12 -5 -11 -16 -17	-10 5 15 15	-9 5 16 10	-12 -55 -55 -8	-15 -6 -11 -15 -52	- 12 6 15 15	-10 7 10 10 15	5 5 2 2	5 5 2 2	4.#1 5 5 2 2	5 5 2 2
A5UNC 10° 55.000 60.000 50.000 20.000 10.000	10 t -50.5 -50.5 -40.5 -21.2	-/* -55 -56	-1/ 2 4 12	-15 50 14	-14 5 11 15 14	-13 -54 -54 -6	-16 2 11 15 12	-16 5 12 16 15	-15 -6 -15 -15 -16	-70 -55 -54 -4	- 14 4 11 15 15	-12 -5 -12 -14 -14	-11 6 15 15	-/5 -5% -53 -7	-10 5 11 14	-14 15 15 14	-15 5 14 16 15	-12 -54 -54 -6	-16 -3 10 15 12	-15 12 15 14	-12 -5 -15 -15 -14	1 3 2 2 2 2 2 2	2 2 2	3 2 2 2 2	5 5 2 2 7
0.000 30.000 23.000	- 10 L - 56 - 5 - 56 - 5 - 44 - 5 - 21 - 2	-/1 -55 -58	-15 1 7 10	-12 % 6 12	-11 5 V 15	-70 -55 -36 -10 5	-15 2 8 11	10	-10 6 11 14	-6/ -55 -55 -0	5	-9 5 12 16 15	15	-10 -54 -55 -9	2	-12 ls 12 14 15	-11 5 15 15	-10 -50 -10 0	-13 2 9 51	- 10 % 11 15 12	-y 5 12 14	5 5 5	5 to 31 to 5 to	N.M.	5 5 2 2
ASUNCTU 53,000 40,000 50,000 20,000 10,000	-50.5 -50.5 -44.5 -21.5	-75 -54 -15	-14 2 10 14	-17 11 15	-16 6 12 16 15	-7a -5a -5a -7	- 16 5 10 14	12	-15 6 15 10	-72 -54 -55 -8	11 13	115	14	-74 -54 -55 -7	12	15	-15 5 16 16	-74 -54 -54 -7	-17 -2 -11 -14 -15	-15 5 12 15 15	-14 6 13 16 15	5 2 2 2 2	3 2 2 2	3 2 2 2 2	2 2 2 2
ASUNC 10 53.000 40.000 50.000 20.000 10.000	-50. -50. -44.	- /3 55 36 4	-17 8 12	10	1 %	-12 -54 -54 -7	10 11	12	15 15	-59	11	12	13	-17 -54 -53 -6	11	15 15	16	-12 -54 -54 -8	13	12 14	-12 5 13 15 14	2 2 2	4 95 5 2 2	5 2 2 2 2 2	3 2 2 2 2
ASUMC 10 55,000 40,000 50,000 20,000 10,000	-5A. -56. -44. -21.	5 -11 5 -55 5 -55 2 -6	-20 5 12	-18 5 13	1 N	-/6 ->9 -52 ->	12	14	15 18	-54 -54	1 11	1 1	14	-51	1 12	16	15 17	-54 -52	12 15	1 to	14 17	3 3 2 2 2	3 5 2 2 2	5 N.H 5 2 2	2 ? ? ?
ASUNC 10 53,000 40,000 50,000 20,000 10,000	-56. -56. -44. -21.	5 -77 5 -56 5 -56 7 -6	11	11	14	-16 -52 -52	1 1	1 14	15	- 51 - 5	s 1	) (   1-	5 16 6 15	-51	2 1	5 14	15 17	-55 -57 -6	12	- 14 16	14 17	3 3 2 2 2 2 2	5 5 7 2 7	5 N.H 5 7 2 2	2 2 2 2
ASUNC 10 55,000 40,000 50,000 70,000 10,000	-56. -56. -64. -21.	5 -76 5 -5 5 -5	5 6 2 5 5 16 9 19	2 14 5 11 6 11	15 15 18 18	-5 -5	2 I	2 10	6 17 5 16	-3	2 4 1 0 1 6 1	1 1 2 1 0 1	5 14	-3	3 2 1: 7 1: 9 1:	4 1	15	-5: -5: -1:	1 17 7 14 3 19	16	15	7	173 4 3 2 2 7	16 N.1 5 5 2 2	5 5 2 2

\*D--OIFFEMENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

ND. 06-/17/

								_						•••		-	OUTE S	1		
				EN	MOUT		PERA										_	DARD DEV	1471/	_
	NUARY 0 D75 UB	5 5		RIL OZS D	45	JI	/LY		1.0		DER	005	-		NUAL		7			
-70 -2 -54 -54 1	NS 0 - H - H 3 4 1 12 1 5 16 1	7 - 75 5 - 5 5 - 5 7 - 6	5 - 19 5 4 2 12 5 15	-17 - 0 13	16 7 14 17	-72 -15 -54 -55 12 -8 15	- 15 4 15	-12	-75 -54 -52 -5	-18 2 12 15		-15 5 15	-74 -54 -55 -7	- 18 3 12	-15 5 15	-14 6 14	3 3 2 2	5797 5 5 2 2	N.H1 5 2 2 2	_
-75 -16 -54 - -35 5 -8 1:	2 N 2 11 1 5 15 1	5 -54 2 -54 6 -6	3 1 11 1 14	5 12 15	6 -	54 2 35 11	12	-10 4 15 15	-75 -54 -55 -7				-75 -54 -34 -8	-16 2 11 16 12		-12 6 15 16	5 5 2 2 2	4056 5 5 2 2	N.MI 3 2 2 2	
-77 -20 -55 : -52 12 -5 16 10 14	5 5 6 14 15	-52	13 16	15	H -	55 5	5	-11 6 14 14	-75 -54 -52 -6 9	-17 5 15 15	-15 - 4 14 16 15	- 14 5 15 17 16	-74 -53 -52 -4	-14 3 12 15	-15 6 14 16	-15 7 15 17 16	5 5 2 2 2	3 3 2 2	3	3 2 2 2 2
-76 -20 -53 6 -52 12 -5 16 10 14	14 15 16 16 15 16	-52 - 12 -6	13 16	15 1	8 - 5 -	55 6 56 11	-11 5 13 13	-10 6 14 14	-72 -54 -32 -7	-15 5 12 14 13	-15 - 14 16 15	12 5 15 17 15	-75 -53 -32 -7	-17 4 12 14 15	-14 6 14 16	-12 7 15 17	\$ \$ 2 2	3 3	5	\$ \$ 2
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-75 -1H -54 2 -56 V -8 15 7 12	-16 -15 * 6	-54	-17 2 10 14 15	11 1 15 1	2 -	54 2 55 11	-15 15 15 15	-12 5 14 15 15	-74 -54 -33 -7	-17 - 2 11 14 15	13 15	5 14 16	-75 -54 -54 -8	-17 - 2 10 15	-15 12 15 14	-15 6 15 16 15	5 2 5 5	5 5 5 2 2 2 2 2	2	?
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THE BOEING COMPANY TRANSPORT 0191510N

NO. D6-7177 PAGE 35

ENROUTE ISMPERATURES AND STANDARD DEVIATION IN DEGREES CULSIUS FOR GREAT CINCLE All	NO 01176	I EMPERATIONS	AND STANDARD	OF VIATION	IN DEGREES	CCLSTUS FOR	GREAT	CIRCLE AIR ROUTE	. S
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.D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND	STANDARO	DEVIATION I	N DEGREES	CELSIUS	FOR	GREAT	CIRCLE	A 10	80115	c

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PAGE 38

THE BUEING COMPANY
TRANSPORT DIVISION

ND. DA-717/

		ENROU	TE I	EMPE	RATUR	ES A	NO S	IAND	ARD C	EVIA	110	11	DEGR	ES C	ELSI	US F	OR G	REAT	CIRC	LE A	IR R				
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-0--DIFFERENCE BEIMEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD STMDSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CINCLE ATR ROUTES

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+D--DIFFERENCE HETHERN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

PAGE 40

THE BUEING COMPANY TRANSPORT DIVISION

NO. 06-1171

ENROUTE	TEMPENATURES	AND	STANDARO	DEVIATION	IN OFGREES	C & 1 & 1 115	FOR COL	AT CARCLE	4 10	

			ENRU	UTE	TEMP	EHAT	URES	AND	STAN	DARO	DEVI	ATIO	N IN	086	REES	CELS	TUS	FOR	GREAT	CIR	CLE A	AIR R	OUTES			
	1641									ENROL	JIE	TEM	PERA	TORE									STAN	OARO	DEVIA	LION
	EET	TEMP.	50		075	085	50	D50	075	085	50	JU 050		085	50		OBER D75		50		O75	085	JAN	APR	JOL	120
55. 40. 50. 20.		TO KUA -56.5 -56.5 -44.5 -21.2		-25 1 15 16		-22 4 15 18 15	-79 -52 -50 -10	5	-21 6 16 18	-20 7 17 19 16	-/8 -54 -50 -5	-22 2 14 17	-20 3 15 17		-80 -54 -51 -6	-24 2 13 16	-22 5 14 17 15	-21 4 15 17 15	-80 -54 -51 -5	-25 5 14 16 14	-21 4 15 18 15	-20 5 16 18	3 2 2 2 2 2	3 2 2 2	650 N.	.H1. 3 2 2 2
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55. 40. 50. 20.		TU MAD -50.5 -50.5 -44.5 -21.2	H10 -65 -56 -45 -20	-6 0 -1 0	-5 5 2 4	-2 5 5 5	-61 -55 -61 -1:	-5 2 5 6	-5	-1 7 7 10 10	-64 -49 -52 -7	-7 7 15 15	-5 10 15 16	-3 12 14 17 17	-64 -55 -39 -13	-8 1 6 8	-5 8 11 10	-4 6 10 12	-65 -54 -59 -14	-6 5 5 R	-4 6 9 11	-2 8 11 13	* 5 * * *	5	485 N. 4 5 5	. M 1
55. 40. 50. 20.	000 000 000	10 MAN -50.5 -50.5 -44.5 -21.2 - 4.6	-80 -55 -51 -5	-25 2 15 16 14	-21 3 15 17 15	-20 4 15 18 15	-79 -52 -50 -4 10	-23 5 15 17 15	-20 0 10 10	-10 7 17 17	-78 -54 -50 -4	-21 2 14 17 15	-19 4 15 18 16	-18 5 16 18 16	-78 -54 -51 -5	-22 2 14 16	-20 4 15 17 15	-19 5 16 17 16	-79 -54 -50 -5	-22 3 14 16 14	-20 5 15 18	-18 5 16 18	5 2 2 2 2 2	3 2 2 2 2 2	188 N. 2 1	.H1. 5 2 2 2
55. 40. 50. 20.	000 000 000	10 MIL -50-5 -50-5 -44-5 -21-2	-65 -50 -45 -70	-6 0 -1 1	-\$ \$ ? 4	-2 5 5 5	-61 -54 -41 -15	3 6	-2 5 6 7 8	-0 7 7 10	-65 -49 -52 -7	-6 8 15 14	10 15 16 15	-2 12 17 17	-64 -55 -57 -13	-7 2 6 8 7	-5 8 11 10	-4 6 10 12	-62 -54 -39 -14	-6 5 7 6	-5 7 9 11	-2 9 11 15		4 5 4 4 4	884 N.	,#1.
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+D--DIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

	ENROUTE TEMPERA	TURES AND STANDARD	DEATAILON IN DECK	EES LELSIUS FOR GREAT CIRCLE AIR P	OUTES
HEIGHT IN ISA	JANUARY	APRIL	JULY	OCTOBER ANNUAL	STANDARU DEVIATION
FEET TEMP.	50+050 075 08	50 050 075 085	50 050 075 085	50 050 U75 085 50 050 D75 085	JAN APR JUL OCT
8ANGKOK TO TR1 53.000 -56.5 40.000 -56.5 30.000 -44.5 20.000 -21.2 10.000 - 4.6		-8	-72 - 16 -13 -12 -48 B 11 12 -28 17 19 20 -6 18 19 20 13 17 19 20	-60 -13 -10 -0 -60 -12 -0 -8 -55 2 4 A -53 4 7 0 -36 9 11 12 -36 9 12 14 -10 12 15 14 -10 11 14 16 7 11 15 14 6 11 14 15	4 4 4 4 4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6
BANGKOK TO TUN 53.000 -56.5 40.000 -56.5 50.000 -4.5 20.000 -21.2 10.000 - 4.6	-66 -9 -6 - -55 1 4 -45 2 4	5 -64 -7 -5 -3 6 -54 2 5 7 6 -40 5 7 9 7 -13 8 10 12 7 4 8 11 12	-69 -13 -10 -9 -48 8 11 12 -29 15 18 19 -5 17 18 19 12 16 18 19	-07 -11 -8 -7 -00 -10 -7 -5 -55 1 4 5 -55 5 7 9 -37 7 10 11 -37 7 11 13 -11 10 12 15 -12 10 15 15 5 10 12 15 5 9 12 14	4920 N.MI. 4
8AR8A00S TO BE 55,000 -56.5 40,000 -56.5 50,000 -46.5 20,000 -21.2 10,000 - 4.6	-74 -17 -15 -1 -55 2 4 -37 7 V 1 -10 11 15 1	-75 -16 -15 -14 5 -56 1 3 4 0 -56 9 10 11 4 -9 12 14 15 6 11 12 15	-70 -14 -12 -12 -56 1 2 2 -54 10 11 12 -7 14 15 16 8 15 14 14	-75 -18 -16 -15 -75 -16 -14 -15 -56 2 3 4 -55 1 3 4 -55 11 15 15 -55 9 11 12 -7 14 15 16 -8 13 15 15 8 1* ' ' ' ' 7 12 15 15	1192 N.MI. 5 3 2 5 3 3 2 2 3 2 2 2 2 2 2 2 5 2 1 2
BARBADOS TO CAI 53.000 -56.5 40.000 -56.5 50.000 -46.5 20.000 -21.2 10.000 - 4.6	-78 -21 -20 -1 -54 3 5 -33 11 12 1 -6 15 16 1	9 -78 -21 -20 -1V 5 -53 & 5 6 -51 15 14 15 7 -6 15 17 17 5 9 14 15 16	-73 -17 -15 -14 -55 1 3 3 -55 11 12 13 -7 14 15 16 9 14 15 15	-77 : 1, -id -77 -20 -16 -17 -54 3 4 5 -55 3 4 5 -52 12 15 14 15 -6 16 17 17 -6 15 16 17 10 14 15 16 9 14 15 15	5 2 2 2 2 2 2 2 2 2 1 1
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BAMBADOS 10 GE( 53,000 -56.5 40,000 -56.5 30,000 -44.5 20,000 -21.2 10,000 - 4.6	-78 -22 -20 -1 -54 5 4 -35 11 13 1 -6 15 16 1	5 -55 4 5 6	-75 -17 -15 -14 -55 2 3 4 -55 12 13 15 -7 14 15 16 9 14 15 15	-77 -21 -19 -18 -77 -20 -18 -17 -54 5 4 5 -55 3 5 6 -51 14 15 15 -52 15 14 15 -6 16 17 17 -6 15 16 17 10 14 15 16	401 NoH1.  3 3 3 5 5 5 2 2 2 2 2 2 2 2 1 1 2 2 1 2
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BARBADOS TO K19 53.000 -50.5 60.000 -50.5 30.000 -44.5 20.000 -21.2 10.000 - 4.6	-77 -21 -19 -1 -54 5 6	5 -53 3 4 5 2 -55 12 15 14 6 -6 15 16 17	-73 -16 -15 -16 -56 1 2 3 -55 11 12 13 -7 16 15 16 9 16 16 15	-77 -21 -12 -18 -76 -20 -17 -18 -54 3 4 4 5 -54 2 4 5 -52 15 14 14 -55 12 15 15 -6 16 16 17 -7 15 16 16 7 9 14 15 15 9 15 14 15	10h1 N.ME. 3 3 2 3 3 2 2 2 2 2 1 1 2 2 1 1
BARBAGOS FO LA. 55.000 -56.5 40.000 -56.5 50.000 -44.5 20.000 -21.2 10.000 - 4.6	-70 -14 -11 -1 -56 0 5 -40 5 7	4 -57 -0 2 4 8 -38 7 8 9 2 -11 10 12 13	-68 -12 -10 -9 -55 2 3 4 -35 9 11 11 -8 13 15 15 8 12 13 14	-71 -15 -13 -12 -70 -13 -11 -10 -55 1 3 6 -56 1 5 5 -55 10 11 12 -57 8 10 11 13 14 7 12 15 14 6 10 12 15	2508 N.MI. 5 5 3 3 4 4 2 5 5 2 2 2 5 3 2 2 2 5 3 2 2 2
BARBAOOS TO LOP 53.000 -56.5 40.000 -56.5 30.000 -46.5 20.000 -21.2 10.000 - 4.6	-66 -9 -7 - -57 -1 3 -63 2 6 -16 5 7	5 -64 -7 -5 -4 5 -57 -1 3 4 5 -41 4 5 6 9 -15 6 9 10 8 1 5 8 9	-65 -6 -6 -5 -5 -5 -5 -6 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7	-00 -10 -8 -0 -05 -8 -0 -4 -50 1 5 5 -50 1 5 5 -11 10 12 13 -13 8 10 12 4 8 10 11 5 7 9 10	3645 N.MI. 4 3 5 3 5 5 5 4 3 5 5 5 4 3 2 5 4 5 2 5
BARBADOS 10 MI/ 53.000 -56.5 40.000 -56.5 30.000 -14.5 20.000 -21.2 10.000 - 4.6	-76 -19 -18 -1	5 -54 2 4 4 1 -54 10 11 12 5 -8 14 15 16	-72 -15 -16 -15 -56 0 2 2 -56 11 12 12 -7 16 15 16 9 15 16 16	-76 -20 -18 -17 -75 -18 -16 -15 -55 2 3 4 -55 2 3 4 -55 2 3 4 -54 10 12 13 -6 15 16 17 -7 14 15 16 9 15 14 15 8 13 14 14	1400 N.MI. 3 3 2 3 3 2 2 2 2 2 1 2 2 2 1 1
8A48AUOS 10 MON 53.000 -56.5 40.000 -56.5 50.000 -44.5 20.000 -21.2 10.000 - 4.6	-69 -13 -11 - -56 1 5 -61 4 6 -16 7 9 1	5 -56 0 5 4 7 -59 5 7 8	-67 -11 -9 -8 -56 1 2 3 -35 10 11 12 -8 15 15 15 7 12 13 14	-70 -16 -12 -10 -69 -12 -10 -9 -55 2 6 5 -56 1 3 6 -36 9 10 11 -38 7 9 10 -9 12 15 6 10 12 15 6 8 10 11	2075 NoME.  5
BARBADOS TO NA: 53.000 -56.5 40.000 -56.5 50.000 -44.5 20.000 -21.2 10.000 - 4.6	-76 -19 -18 -1 -54 2 4 -56 9 10 1	5 -54 2 4 4 1 -34 10 12 12 5 -7 14 15 16	-72 -15 -14 -15 -56 1 2 2 -54 11 12 12 -7 14 15 16 9 15 14 15	-76 -20 -18 -17 -75 -18 -16 -15 -55 2 3 4 -55 2 3 4 -34 15 16 17 -7 14 15 16 8 13 14 14	1245 N.HI. 3 3 2 3 3 2 2 2 2 2 1 1 2 2 1 1
8AR8AOOS TO NEI 53,000 -56.5 40,000 -56.5 30,000 -44.5 20,000 -21.2 10,000 - 4.6	-71 -15 -13 -1 -56 1 3 -39 5 7 -12 9 11 1	1 -70 -13 -11 -10 4 -56 0 2 4 8 -36 7 8 9 2 -11 10 12 15 1 4 8 10 11	-69 -12 -10 -10 -56 1 2 3 -34 10 11 12 -7 14 15 16 8 12 13 14	-72 -16 -13 -12 -70 -14 -12 -11 -55 2 5 4 -56 1 5 4 -15 -15 10 11 12 -17 8 10 11 15 14 7 11 13 14 5 10 11 12	1817 N-MI. 3 3 2 3 4 5 2 3 3 2 2 2 3 3 2 2 3 3 2 2

10.000 - 4.6 3 7 9 11 4 8 10 11 8 12 13 14 7 11 15 14 5 10 11 12 3 3 2

+D--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSTUS FOR GREAT CIRCLE AIR ROUTES

	CHROC	,16	CHPI	RAIC	MES.	440	SIANG	JAKU	OE VI	1110	N 1N	176 04	tts (	LELS	105	OH C	REAL	CIRC	LE	AIR R	001ES			
HE 1GHT	_	JANU			_	441	RIL	WOU	TE		PERAT	UHE		OF L	DEEA			X 811			STAN	GARU	OEVI	ATION
FEES TEPP.	50	050		085	50		075	DHS	50	050		085	50		D/S	085	50	050	O75		JAN	APR	JUL	OCT
40,000 -56.5 50,000 -44.5	-11 -54 - 54	-21 3	-14	-16 6 15	- 52	12	-20 15	14	- 55	11	-15 2 12	12	-77 -56 -52	13	14	- 16	-76 -54 -55	-20 2 12	15	-16	5 5 2	3 2 2	259 1	2 2
20,000 -71.2 10,000 - 4.6 BARRADOS TO PO 55,000 -56.5	-/H		-20	-19	-14	15 13	-20	- 19	-7 -75	-17	15 15 -15	56 15	-17		17 15 -19	17 15 - 18	-77		16 14 - 18	-14	2 2	2	2	(-M1.
49,000 -56.5 50,000 -44.5 20,000 -71.2 10,300 - 6.6	-54 -15 -7 8	11	12 16 14	13 17 15	- 55 - 51 - 6	15 15 16	16 16 15	15 17 16	- 55 - 15 - 7 - 7	11	12 15 15	15 16 15	-54 -55 -6 10	15	16	15 17 16	-54 -32 -6 9	12 15 14	15	5 14 17 15	5 5 5	2 2	1	5
6ARBAU05 10 5A/ 55.000 -56.5 50.000 -44.5 20.000 -21.2 10.000 -4.6			-14 12 15	-1a 6 1/ 16 14	-11 -54 -55 -1	-21 -5 -17 -16 -15	-19 15 16 14	-18 5 15 16 15	-15 -56 -54 -7	- 16 1 11 14	-15 2 12 15 14	-14 -5 -12 -16 -15	-11 -54 -32 -6	-20 5 15 16	-19 4 16 16 15	- 18 14 17 15	-76 -54 -35 -7	-19 2 11 15 55	-17 6 15 16 14	-56 4 15 16 55	3 2 2 2 2	2 2 2	495 P	1.M1. 3 2 2 1
######################################			-19 5 12 16 14	-16 6 15 16 15	-16 -34 -57	-22 5 12 15	-20 5 16 16	- 19 6 19 17 15	-15 -55 -54 -7	-16 	-15 -5 -12 -15	-14 5 15 16	-11 -54 -52 -6	-21 5 13 16 14	- 19 4 14 17 15	- 18 4 15 17 15	-16 -54 -55 -6	-20 2 12 15	-18 4 15 16	-17 5 14 57 15	\$ \$ 2 2 2	5 5 2 2 2	95 1 2 2 1	3 2 2 1
64H8AUOS TO SI. 55,000 -56.5 40,000 -56.5 50,000 -44.5 20,000 -21.2 10,000 - 4.6		-21 -21 -11 16	-1v 5 12 16	-16   15   16   15	-76 -55 -57 -6	-22 5 15 15	-20 5 16 16	- 19 6 14 17 15	-/3 -55 -51 -/	- 16 1 11 14 14	-15 -3 -12 -15 -15	- 1 h - 5 - 15 - 16 - 15	-11 -5h -52 -6	-21 5 15 16	-19 6 14 17 15	-18 15 17 15	-16 -54 -55 -6	-20 2 12 15	-18 13 16 15	-17 5 14 17 15	\$ \$ 2 2 2	5 5 2 2 2 2	101 P	1.H1. 5 2 2 1
6ARBAUPS TO TAI 55.000 -56.5 40.000 -56.5 50.000 -44.5 20.000 -21.2 10.000 -4.6		- 1 v - 1 v - 1 s - 1 s	-1/ 10 14 15	-16 5 11 15	-/4 -55 -55 -4	-16 2 10 15	-16 -5 -51 -15 -15	- 15 12 15 16	-12 -56 -54 -1	- 15 0 11 14	-14 2 12 15 14	- 15 2 12 16 16	-76 -54 -55 -6	-20 2 22 15	-1/ h 15 16 16	-16 14 17 15	-14 -55 -54 -7 H	-16 2 10 14 12	- 1A - 5 - 12 - 15 - 15	-15 4 15 16 14	\$ \$ 2 2	2 2 2 2	1569 A 2 2 1	3 7 2 2 2
54184005 10 10 55.090 -56.5 43.990 -56.5 50.000 -44.5 20.000 -71.2 10.000 - 4.6	-70 -70 -56 -40 -13	-15	-11 5 6 10	-10 5 7 11	-66 -56 -59 -12	-12 0 A	-10 5 7	# 12 10	-66 -56 -15 -H	-11 10 14 12	-10 2 11 15	-9 3 12 15	-/1 -55 -56 -9	-15 2 4 12	-12 -11 16 12	- 11 - 5 - 12 - 15 - 15	-69 -56 -57 -11	-15 1 7 11	-11 5 0 13	-10 10 14 12	5 5 5 5	5 5 5	2110 N 2 2 2 2 2	5 5 5 5 5
55.000 -56.5 40.000 -56.5 50.000 -66.5 70.000 -46.5 10.000 - 4.6	14104 -7d -54 -55 -7		-20 5 12 16 16	- IV 5 15 17 15	-/H -51 -51	-22 -3 -15 -15 -16	-25 5 16 16	- Iv 6 15 17	-/5 -55 -51 -/	-1/ -1 -11 -14 -15	- 15 - 3 - 12 - 15 - 15	- 14 h 15 10	- // -5% -51 -6 10	-21 -5 -15 -16 -14	- 19 6 16 17 15	-13 5 15 17 16	-:1 -54 -52 -0	-2 5 12 55 14	-16 6 13 16 15	-57 5 14 17 15	\$ \$ 2 2 2	5 2 2 2	164 A	3 2 2 1
BARLELONA 10 6/ 55.000 - 56.5 60.000 - 56.5 50.000 - 48.5 20.000 - 4.6	A5= A -57 -56 -68 -72 -6	- 5 0 - 5 - 1	-0 -1 -1	5 0 5	- 54 - 56 - 45 - 16 - 1	-2 6 -0 5	0 5 7 5	2 5 1 7 8	-64 -52 -1	-8 A 12 14	-6 11 14 16	-6 12 15 17	-62 -56 -61 -16	-00	- h 5 6 9	-2 10 11	+61 -54 -41 -15	-5 -5 -6 -6	-2	-0 8 9	5 5 6	5 5	284 N 5 5 5 5	3 1 5 5
68HCELUNA 10 91 55.000 -56.5 40.000 -56.5 50.000 -49.5 20.000 -21.2 10.000 - 4.6	-59 -56 -68 -25 -6	-2 -2 -2 -2	1 5 -1 1	2 5 -0 5	-58 -51 -65 -19 -2	-1 -1 -1 2	1 2 5	5 5 6 7	-65 -67 -56 -9	-6 H 10 12 12	10 15 14	- 5 11 14 15	-62 -56 -41 -15	-5 0 5 7	- 1 2 6 9	-2 10 10	-60 -55 -47 -16	- h 2 2 5 5	-1 5 6 8 8	1 7 8 10	5 5	5 5	1640 N 5 5 5 5	5 5 5 5
6ARCELONA 10 69 55,000 -50.5 49,000 -50.5 10.000 -84.5 20.000 -21.2 10.000 - 8.6	-5H -5H -5H -64 -25	-1 -2 -5 -5	? -? 0 0	4 -1 2 2	-55 -57 -67 -21	1 -1 -2 0	0 5	5 5 5	-54 -55 -50 -12	2 4 6 9	5 7 8 11	6 8 9 12 12	-50 -56 -65 -17 -1	- \$ 0 2 5	-0 5 7	1 5 6 9 8	-57 -50 -44 -1V -2	-0 0 0 5	5 6 6	6 5 8	5 5 5	****	585 N	.#1.
BANCELONA 10 BU 55,000 ->6.5 40,000 ->6.5 10,000 -44.5 20,000 -21.7 10,000 - 4.6	-57 -5H -50 -25 -9	-0 -1 -5 -4	5 - 5 - 1 - 1	5 -1 1	-55 -57 -67 -71	-2	1 0 1 5		-55 -52 -16 -17	6 0	6 11	5 4 10 12 12	-54 -56 -62 -16	- 5 0 2 5	-0 5 5 7	4 6 9 8	-57 -56 -44 -19	-0 0 0 5	5 6 6	6 6 8	5 6 5	5	821 N	.H1.
BARCELUNA 10 C/ 51,000 -56.5 40,000 -56.5 50,000 -44.5 20,000 -71.7 10,000 - 4.6	A1RU -60 -56 -47 -21 -5	- <b>b</b> 0 - <b>5</b> - 0	-1 -3 5	0	-54 -57 -64 -17 -0	-0	-0 5 5 6 7	1 6 7 H	-65 -49 -33 -8	-8 R 11 15	-6 10 13 15	-5 11 15 16	-65 -56 -60 -14	-60	-4 5 6 9	- 5 - 6 10 10	-62 -55 -41 -15	-5 7 5 6	-2 5 7 9	-1 / 0 11 11	5 5 4 4	5 5 5	568 N 5 5 5 5 5	. MI. 5 5 5 5
BARCELONA 10 C 55.000 -56.5 40.000 -56.5 50.000 -44.5 20.000 -21.2 10.000 - 4.6	-66	5 -11 -0 -3 7	- <b>9</b> 5 9 9	-8 6 10	-67 -57 -59 -15	-10 -0 >	-8 2 7 11	-7 -8 -12 -11	-67 -54 -55 -8	-10 2 9 15	-8 11 14 14	-/ 5 11 15 14	-69 -55 -56 -9 6	-13 1 8 12 10	-11 -5 -10 -15 -12	-9 h 11 16 15	-66 -56 -58 -11	-11 1 7 10	-9 5 9 12	-6 6 10 15	5 5 5	\$ \$ \$ \$	059 N 3 2 2 7	3 3 3 7 7

\*D--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

LNROOTE	1EMPERATURES	AND S	TANDARD:	DEVIALION	1 N	DEGREES LEESTOS	FOR	GREAL	CIRCLE A	IR ROULES

HE LGH1	ISA		AND	. D V			APK		NKOU	16	1EKF JOL	ERAT	OHE		OC TO	BEK			ANN	UAL		SIAN	DARO OEVIAT	100
FEET	16MP.	50 • D			D85	50	D 50		UUS	50	050		Des	50		075	085	50	D50		085	JAN	APR JUL	061
\$0,000 \$0,000 20,000	NA 10 C -30.5 -50.3 -44.5 -21.2 - 4.6	-68 -	11 -0 5 7	- 3 5 7 7	-H 6 10 10	-61 -51 -39 -15	-10 -0 6 9	-8 2 1 11 10	-/ 4 8 12	-61 -54 -35 -8	-10 2 0 15	-8 11 14	-/ 5 12 15 15	-64 -55 -56 -9	-13 1 8 12 10	-11 5 10 15 12	- 10 - 11 - 14 - 15	-68 -56 -56 -11	-11 1 7 10	-9 3 9 12 11	-8 10 15 12	4 S S S	\$ 912 N. \$	MI. 5 5 5 2 2
10.000	-55.5 -56.5 -44.5 -21.2		0 2 6	-H 5 4 8	-1 55 4 4	-66 -55 -54 -15	- 7 1 6 8	-/ -/ / 10 10	-6 6 8 11	-64 -52 -34 -A	-12 -6 10 13 16	~10 6 12 15	- 4 1 1 5 1 5 1 8	-64 -55 -57 -10	-12 2 8 11	-10 4 9 15	-9 5 10 15	-68 -55 -38 -12 6	-11 2 6 10	-9 4 9 12 13	-7 5 10 13		1891 N. 5 S 4 2 2 2 2 2 5 2	MI. 3 3 3 2 2
8ARCELD 55,000 40,000 55,000 20,000 10,000		-57 -58 -49 -25	-1 -2 -5	-2 -0	-1 2 2	-55 -57 -67 -21 -4	-1 -2 0 0	5 0 5	5 2 5	-54 -53 -39 -12	2 4 5 9	5 7 8 11	6 9 9 12 12	-57 -56 -45 -17	0 2 5	-0 5 4 7	5 6 9 8	-56 -56 -44 -19 -2	0 0 0 2 2	5 6 6	5 6 5	5 6 4 5 5	629 No.	M 1 .
HARCELU! 55,000 40,000 50,000 20,000 10,000		-57 -58 -49 -25	#   -   - 2 - 5 - 4 - 5	-2 -0 0	-1 -2 2	-55 -57 -47 -21	1 -1 -2 1 0	5 0 1	5 5 5	-54 -55 -59 -12	2 4 6 9	7 8 11	6 6 7 12 12	-5 V -5 0 -4 5 -1 0 -1	- 5 D 2 5	-0 5 7	1 5 9 8	-51 -56 -44 -14 -2	-D 0 0 5	5 6 6	6 5 8 8	5 6 4 5 5	590 N.I	H [ .
04 4 CELD 5 1 000 40 500 53 000 20 000 10 600	-56.5 -56.5 -44.5 -21.2	-58 -58 -47 -24	-1 -2 -4 -5 -2	2 -2 -1 -1	-0 2 5	->n ->n ->n -&n -20	-1 -2 1	5 2 1 4 4	5 2 5 5	-56 -55 -56 -12	0 5 6 10	5 6 7 12 12	10 -15 15	-60 -56 -47 -16 -0	-5 D 2 5	- 1 5 5 8	0 4 4 9 8	-51 -50 -44 -18	-1 0 1 5	2 4 1	* 0 0 1	5 6 4 5 5	\$44 N.1	*1.
6AHCELO: 53.00G 4J.00U 50.00U 20.000 10.20U	-56.5 -56.5 -44.5 -21.2	-58 -58 -49 -25	- 1 - 2 - 5 - 5	\$ -2 0 0	5-1-22	-55 -56 -47 -21	-2 -0	5 5 3 5 2	0 1 2 4 4	-55 -52 -40 -15	5 5 11	8 7 10 9	1 G 8	-58 -56 -45 -17	-7 0 1 4	1 4 4	2 5 5 8 1	-50 -50 -45 -14	1 1 -0 2	5 5 5	5 1	5 6 4 5 5	908 N.	11.
000,000 000,000 000,000	44 10 M -56.5 -56.5 -44.5 -21.2	-51 -56 -50 -26	-4	3 - 1 - 1	5 4 -1 1	-55 -57 -47 -21	-0 -0	-0	5 0 1 4 4	-55 -52 -59 -15	5 8 8	6 ! ! 10 10	/ V 12 11	-5v -50 -45 -11	-2 0 1 4	0 5 4 7	2 5 6 9 7	-56 -56 -45 -17	1 -0 2	5 5	5	5 6 4 5 5	005 No.1	5
10.000	-10.5 -10.5 -10.5 -44.5 -21.2	-57 -59 -51 -28	-0	- 5 - 5	5 -5 -1	-54 -56 -48 -25	1 -4 -2 -2	5 -1 1	0 5	-51 -51 -40 -14	5 4 7 6	6 / 10 9	10 H 11	-58 -56 -46 -19	-1 0 0 5	1 4 5	5 5 8 6	-55 -55 -46 -21 -5	2 1 -1 0	5 2 4 5	0 1	5 5 6 6	1418 N.1	*1. 5 4 5
10,000 20,000	-10.7 -10.7 -10.5 -44.5 -21.2 - 4.6	-57 - -57 - -67 - -24 -	-0 -1 -5	5 - 5 - 0	5 -1 1	-56 -51 -46 -20 -1	0 -1 -2 1	5 1 4	44256	-58 -50 -17 -11	-2 6 8 11 10	1 V 10 12 15	2 10 11 15	-00 -50 -42 -10	0 5	-1 5 5	-0 4 2 2 8	-58 -55 -44 -18	-1 1 1	25577	5 7 0 9	5 5 4 4	1204 No.1	5 5 5
10,000 10,000	4A 10 K -50.5 +50.5 -44.5 -21.2		12 1 2 0 0	- 0 - 6 - 6	- 6 5 0 0	-61 -54 -54 -12	- 10	-8 5 A 10	-/ / / 11 12	-10 -51 -35 -7 15	- 14 5 12 15	- 12 7 15 16	-11 / 14 17	-10 -54 -56 -10	~15 2 8 11	-11 -4 10 13	-10 5 11 15	-67 -54 -57 -11	-12 · 3 · 7 · 10 · 11	-10 5 10 12	-8 6 11 15	1 4 2 5 5	1787 No.1 5 5 4 2 2 2 2 2 5 2	*I. 5 5 2 2 2
6AHCELUN 53,000 40,000 50,000 20,000 10,000	-50.5 -50.5 -44.5 -21.2	-54 -58	- 5 - 2 - 2 0 1	1 2 -0 1	2 5 1 5 5	-58 -58 -45 -18 -1	-1 -1 -0 5	2 2 5 6	5 4 5 6 7	-50 -53 -37 -10	- 5 5 R 11	-1 6 10 15	0 /	-51 -56 -61 -14	-5	-2 5 6 9 8	-1 4 8 10 9	-60 -56 -42 -15	- 5 0 2 5	0 5 5	2 5 7 10	5 6 5 4	556 N.I	4). 5 4
HA4CELON 5 1.000 40.000 50,000 20.000 10.000	-56.5 -56.5 -44.5 -21.2	-58 - -58 - -47 - -24 -	- 1 - 2 - 4 - 5	2 -2 -1	4 5 -0 2 5	-55 -57 -67 -21	-1 -2	5 1 5 5	5 6 2 5 5 5	-54 -55 -50 -15	2 4 5 9 4	5 7 8 11	6 9 9 12 12	-50 -50 -45 -17	- 5 0 2 5	-0 5 7	1 5 6 9 6	-51 -56 -44 -18	-0 0 0 5	5	6 5 8	5 6 4 5 5	619 No.4	11. 5
#AHCELON 55.900 40.000 50.000 20.000 10.000	-56.5 -56.5 -44.5 -21.2	-57 -58 -47 -22	- 2 - 5	1 2 -0 5	3 5 1 4 5	-57 -58 -45 -19	-1 -1 -1 -1 5	2 2 2 5 6	4 4 5 6 7	-59 -55 -57 -11	- 5 5 7 11 12	-0 6 10 12	1 8 11 15	-61 -51 -41 -15	- 4 - 0 - 5	-2 5 6 9 8	-1 -1 10 9	-59 -56 -45 -16	-\$ 0 2 5	1 5 8 9	? ? ? !	5 6 4 4	260 No.1	* 1 . 5 . 6 . 5 . 5 .
BARCELO* 53,000 40,000 50.000 20.000 10.000	-56.5 -56.5 -44.5 -21.2 - 4.6	-56 -58 -51 -27 -12	-6		- 5 - 0 - 2	-54 -56 -48 -22 -6	2 0 -5 -1 -2	5 -0 2	6 1 4 5	-51 -51 -40 -13 2	6 5 8 7	8 8 7 10 9	16	-58 -56 -44 -18 -5	-1 1 3 1	1 4 6 5	\$ \$ 8 6	-55 -55 -46 -20 -5	-1 -1 -0	5 5 5	6 1 5 1 5 1 5 1 5 MOS III	5 4 5 6	1628 No.1	MI. 4 4 5

+D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

EMMOUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

		ENHOU	TE T	EMPE	RATUR	E5 A	NO S	TANO	ARO (					ES C	ELSIL	15 FC	OR GR	EAT	IRCL	EAL					-
HL 1GH1	١		JANU	140			APR		NROU	E	JUL	PRATI	UKE		OCTO	ER			ANNU	AL				VIATION	
FEET	TEMP.		050			50		075	085	50		0/5	065	50	050	15 (	185	50 0	50 0	75 0	85	JAN A	PR .	IUL OCT	-
10,000	-56.5 -56.5 -66.5 -21.2	-58 -58 -54	-1 -4 -11	-7 -7 -9		-51 -52 -44 -25 -10		8 -1 -0	10	-48 -49 -57 -13	7 6 7	11 11 10 11	12 13 12 12	-54 -55 -46 -22 -7	2 5 -1 -1	5 6 2 5 1	5 5 5	-52 -53 -46 -25 -8	5 -2 -2		10	5 5 6	5	12 N.HI. 5 5 5 5 6 6	
	->6.5 ->6.5 -\$6.5 -\$4.5 -21.2 - 4.6	-72 -55 -59	-15 1 0 0	-13 ·	-12 5 8 12 12	-71 -55 -35 -10	- 16 2 9 11 10	-12 6 11 13 12	- 11 6 11 14 13	-71 -55 -34 -7 10	-14 3 11 14 15	- 12 · 5 · 12 · 15 · 16	- 11 6 13 16	-72 -54 -36 -8	-16 - 3 10 13 12	10 12 16 16	15 5 13 15	-71 -56 -35 -9 7		11	12 5 12 16 16	\$ 2 2 2	3 4 2 2 2 2	15 N.M1. 3 3 2 2 2 2 2 2 2 2	
NAMEEL 0 55.000 40.000 50.000 20.000 10.000	-50.5 -50.5 -44.5 -21.2	-5H -5H -57 -6H -23	-2 -0 -4 -2 -2	1 3 -2 1	3 5 -0 2 2	-51 -51 -45 -14 -2	-1 -1 -1 2 3	2 5 5 5	5 5 6 7	-62 -69 -15 -9	-5 7 10 12 12	- 5 10 12 14 14	-2 11 13 15 15	-61 -56 -61 -15	-5 0 3 6	-5 2 6 8	-1 6 7 9 0	-60 -55 -62 -16 0	-5 2 2 5 5	-0 5 6 6	10	5 5	150	3 3 3 3 3 5 3 5 5	
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+D--DIFFERENCE BEIMEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

PAGE 4

THE BDEING COMPANY
TRANSPORT DIVISION

NO. D6-7177

GREES CELSIUS FOR GREAT CINCER ATR MOUTES
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\*D--OIFFERENCE BEINEEN INDICATEO PER CLNT MELIABILITY TEMPEMATURE AND INTEMNATIONAL SIANDARD AIMOSPHERE TEMPERATURE

ENRUUTE TEMPERATURES AND STANDARD DEVIATION	IN DEGREES CELSIUS FOR GREAT C "CLE AIR HOUTES
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PAGE 48																		BOLI							_

THE BOEING COMPANY TRANSPORT DIVISION

ND. D6-717/

ENROUTE	TEMPERATURES	ANO	STANDARD	DEVIATION	IN	DEGREES	CELSIUS	5 OB	CREAT	CIRCLE	 

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+D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CINCLE AIR ROUTES

-		T	1				0.123		31 414	UARI	DEVI	4110	4 1.4	DEG	AEE2	CELS	102	FUR	GREAT	LIK	LLE	AIR	ROUTES			
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	8E1RU1 53.000 40.000 30.000 20.000 10.000	10 DUSS -50.5 -50.5 -44.5 -21.2 - 4.6	-57 -57 -50 -25 -10	-1 -1 -0 -4 -5	2 5 -5 -1 -2	-2 1 -0	-56 -56 -66 -21 -6	1 0 -2 1 0	5 6 0 5 5	6 2 5 5	-57 -49 -16 -11	-1 7 8 11	10 11 13	3 11 12 14 12	-60 -56 -62 -16 -0	-3 0 2 5	-1 5 5 7	0	-57 -55 -66 -16	-1 2 1 5	2 5 5 7 6	5 7 7 19	5	16	28 N.	#1 . 6 5
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	8t   RU1 55,300 43,030 50,000 20,000 10,000	10 GENES -50.5 -50.5 -44.5 -21.2 - 4.6	-57 -57 -69 -26	-1 -0 -5 -3	2 3 -5 -0	5 -1 1	-51 -57 -66 -20 -5	-0 -1 -1	3 1 4	5 2 0	-60 -44 -55 -10	-5 / 9 12	-1 10 12 15	-0 11 15 15	-61 -50 -42 -15	0 5 0	-5 9	-1 6 9	-57 -55 -65 -17 -1	-2 2 2 4 4	1 5 5 /	2 1 1 9	5	15	29 N.	M1.
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\*U--DIFFERENCE BETHELY INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

Pabl 50

THE BDEING COMPANY
THANSPORT DIVISION

NO. 06-7177

ENROUTE	TEMPERATURES	ANU	STANDARD	DEVIATION	IN	DEGREES	CELSIUS	FOR	GREAT	C10C1 E	 

HEIGHT   15A																									
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		ENROU	16 1	EMPE	KATUR	ES A	NO S	AND	NO C	DEVIA	110	IN.	DEGR	EES C	ELSI	US F	DR G	REAT	CIRC	LE A	IR RO	UIES			
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+D--DIFFERENCE BEINCEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

PAGE 52

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

FNROUTE	TEMPERATURES.	AND STANDARD	DEVIATION IN	OFGREES	CELSIUS FO	CREA1	CIRCLE AIR ROUTES	٤.

		U1L	I EMP	ERATL	IRES	ANU !	STANE	) A R ()	DEAT	1110	N IN	UEGR	EES (	ELS	IUS F	ORC	REAL	CIRC	LE	AIR R	OUTES		
HEIGHI IN ISA			JARY		Τ	API	II.	NROU		JUL					BER				VUAL			OARO OF	
FEET TEMP.	50	υ <b>50</b>	D/5	DB5	50	050	0/5	Det5	50	D50	075	DHS	50	050	D75	D85	50	D50	075	085	JAN		JL
BELEM TO CAIR 53,000 -50.5 40,000 -50.5 30,000 -44.5 20,000 -21.2 10,000 - 4.6	-/s -54 -11	-17 2 6 10	-15 5 8 12 11	-14 6 8 12 12	-72 -56 -56 -9	-16 5 10 12 12	- 14 5 12 14	-15 7 15 14	-74 -52 -51 -6 12	-17 6 15 16 17	- 15 6 14 17 18	-14 6 15 17 18	-74 -55 -54 -7	-18 5 11 14	-16 6 12 15 16	-15 5 13 15 15	-75 -55 -54 -8	-17 5 10 13	-15 5 12 15	-14 6 15 15	5 5 2 2 2	5 5 2 2 2	7 N. 1 3 2 2 2 2
BELEM 10 CARA 51.000 -50.5 40.000 -50.5 50.000 -44.5 20.000 -21.2 10.000 - 4.4	-78 -54 -11	-22 5 12 10 14	-20 15 18 16	-19 5 14 18	-78 -52 -30 -5	-21 5 14 17 16	-20 6 16 18	-14 7 17 18 16	-75 -54 -52 -7	-16 2 12 14	- 14 14 15 15	-15 h 14 16 15	-77 -5% -50 -6	-21 5 14 16 15	-19 4 15 17 16	-16 5 16 17	-76 -54 -31 -6	-20 3 13 16	-17 5 15 17	-16 6 16 18	5 5 2 2 2	1510 5 5 2 2 2	9 N. 1 2 2 1
BELEM TO COPE 55,000 -56.5 40,000 -56.5 50,000 -44.5 20,000 -21.2 10,000 - 4.6	-67 -57 -42	-11 -0 5	-8 5 8	-7	-00 -50 -54 -14 2	-y 1 5 6	-7 10 V	-6 6 8 11	-64 -53 -36 -7	-8 3 9 12	-6 5 10 13	-5 7 11 14	-68 -55 -57 -11	-12 1 8 10	-10 4 9 12	-8 5 10 13 12	-67 -55 -58 -12	-10 6 9	-7 8 15	-6 5 10 12	5 5	\$ 5 5 5 5 5	5 5 5 2
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BELEM 10 HCUS 55.000 -56.5 40.006 -56.5 50.006 -44.5 20.000 -21.2		-20 2 10 14 12	-18 4 11 15 14	-17 4 12 16 14	-15 -54 -55 -1	-17 -5 -11 -14 -11	-17 5 15 16 14	-15 15 10 15	-12 -55 -55 -1	-16 1 12 14 14	-14 2 13 15	-15 -3 -15 -16 -15	-11 -54 -12 -6	-20 2 13 15 14	-18 4 14 10 15	-17 4 15 17 16	-75 -54 -55 -7	-19 2 11 14 15	-17 6 15 16	-15 5 14 16 15	\$ \$ 2 2 2	526 5 5 2 2 2	2 2 2 1
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BELEM 10 L1586 55,000 -56.5 10,000 -56.5 50,000 -44.5 10,000 -21.2	-12 -56 -58	- 16 1 6 10	-15 5 8 12	-12 5 4 15	-71 -55 -55 -10	-15 1 11 10	-13 4 11 61 12	-12 5 11 14 13	-71 -55 -54 -7	- 14 - 5 - 11 - 14	-12 4 12 15 15	-11 5 13 16 15	-73 -54 -14 -8 8	-17 2 11 14 12	-15 4 12 15 14	- 14 5 13 15 14	-12 -55 -55 -9 7	-15 2 4 12 12	-15 -11 -11 -15	-12 5 12 15 14	\$ \$ 2 2 2	\$2 % C \$ \$ 2 2 2	N.P
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55.000 -56.5 40.000 -56.5 50.000 -44.5 20.000 -21.2	-71 -56 -59 -12	-15 1 6 10	-15 5 6	-11 5 8 12 12	-71 -55 -56 -10	-14 1 7 11	-12 4 10 13 12	-11 -5 -11 -13 -12	-70 -53 -54 -8	- 14 5 10 14	-12 5 12 15	-11 5 13 15	-72 -54 -54 -8 -7	-16 2 10 13	- 14 4 12 14 15	-13 -5 13 15 16	-71 -55 -36 -9	-15 2 4 12	-12 4 !1 !5	-11 5 11 14	5 h 2 2 2	\$508 \$ 2 2	N.H 3 2 2 2 2
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	TION IN DEGREES CELSIUS FOR GREAT CLUCIE AIR POLITES	DEGREES CHISTUS FO	RU DEVIATION IN	AND STANDARD	TEMPERATURES	ENRUUTE
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T	-	I TAK DO		CHE CH	-1046	3 440	214	TUARI	DEAL	ATTO	1N 1N	DEG	RELS	CELS	SIUS	FOR	GREAT	CII	HCLE	AIR	ROUTES	<u>.                                    </u>		
HE IGHT IN	ISA		JANU		e T		PRIL	I NH O	UIL		PERA	TURE	_	OC I	Out R		T	A 4	NUA		STAN	DARD U	EVIA	TION
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10.000 - 20.000 -	50.5	-7d - -54 -52 -5	17	V -    	-52 -10	15	-1 v 1 c 1 d 1 d 1 d	- 14 4 17 19	- 7 1 - 5 3 - 5 1 - 7	-15 · 5 · 15 · 16 · 15	- 15 5 14 15	-12 6 15 16	-15 -55 -50 -6 10	-19 3 14 16 15		-16 5 17 16	-76 -53 -51 -5	-14 5 14 16	-16 0 15 17	-14 / 10   10	3 2 2 2	90°	5 4.H	2 2
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10.000 -	56.5 56.5 44.5 21.2	-/5 -  -56 -57 -10	; ;	5 -14 5 5 7 10 5 15 2 15	-55 -35 -9	10	-14 4 11 14 12	5	-71 -54 -54 -7	- 14	- 15 - - 4 - 12 - 15 - 14		-74 -54 -11 -7	-18 - 2 11 14	- 16 - 15 15	-15 5 14 16	-/3 - -55 -35 -8	- 16 - 2 10 13	- 14 3 12 14	-15 4 12 15	5 5 2 2	2641 5 4 2 2 2	1 N, M 3 2 2 2	
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•DDIFFE PAGE 54	HENCE I	BEIWE	N IN	DICAT	EO PE	K CEN	1 RE	LIABI	LITY	TEM	PERA	TURE	ANO	INTE	HNAT		STAI					EMPERAT	lure.	

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ENROUTE	TEMPERATURES	AND	STANDARD	DEVIATION	IN DEGREES	CELSTING I	FOR GREAT	CIRCLE AIR BOUTES

		ENHO	UTE	EMP	ERAIL	JRES A	ANO S	STAN	DAND	0E V 1	ATIO	1 14	DE GA	EES	CELSI	US F	OR (	REAT	CIRC	LE	A IR R	OUTES			
HL 1GHT	15A		. IA WI	JARY			API		WHOL	IT.	TEMA	ERAT	URE		Nº TO	BER			ANI	IUAL		STAN	0440	DEV1	ATION
FEET	TEMP.	50	U50		085	50	050		085	50	050		Des	50		0/5		50	050		085	JAN	APR	JUL	100
BELFAST 53.000 60.000 50.000 20.000 10.000		-57 -58 -50 -26 -10	-1 -1 -6 -5	3 -3 -1 -2	4 5 -2 1 0	-55 -55 -47 -23 -7	5 - 5 - 2 - 2	6 6 -0 2 1	7 9 1 5 2	-49 -50 -41 -15	5 6 5	10 10 6 9	11 12 7 10 9	-57 -56 -44 -19	-1 0 0 2 2	2 4 3 6 5	* 6 * 7 6	-54 -55 -46 -21	2 2 -1 0 -0	6 2 6 3	7 9 4 6 5	5 6 6 5	5 6	446 F	V.MI. 5 6 5
8ELFAST 53.000 40.000 50.000 20.000 10.000	-50.5 -50.5 -44.5 -21.2	OGNE -57 -58 -50 -26 -10	-1 -2 -6 -5	2 5 -5 -1	5 -2 1 0	-55 -55 -48 -23 -7	-3 -3 -2	0 0 -1 1	1 5 2	-49 -50 -41 -15	5 6 5	10 10 6 9	11 12 7 10 9	-57 -56 -88 -19 -5	-1 0 0 2	3 6	* 6 2 7 6	-54 -55 -46 -21 -5	2 2 -1 0 -0	6 2 4 3	7 9 4 6 5	5 6 4 6 5	7 4 5	552	1. M1. 5 4 5
40.000 50.000 20.000	-56.5 -56.5 -44.5 -21.2	-58 -58 -51 -51 -28 -11	-1 -2 -1 -1 -1	2 -6 -5	5 -3 -0 -1	-55 -54 -48 -24 -8	5 -4 -5	6 7 -1 0 -0	10 0 2 1	-48 -50 -42 -16 -0	9 7 3 6	11 11 5 8	12 13 7 9	-57 -56 -45 -20 -5	-0 1 -1 1	\$ 6 2 5 5	46475	-54 -54 -67 -22 -6	3 2 -2 -1	1 3 2	10 3 5	5 6 4 6 5	4 / 4 5 5 5	646 A 6 4 5	6 6 5 5
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BELFAST 55.000 40.000 50.000 20.000 10.000	10 66% -50.5 -50.5 -44.5 -21.2 - 4.6	-57 -54 -50 -20	-1 -2 -5 -4	5 -5 -1	6 -1 1	-54 -56 -47 -72 -6	5 1 -3 -1 -1	5 -0 2	P. 1	-51 -51 -40 -14	5	8 9 7 9 8	9 11 5 11	-58 -50 -44 -19 -2	-1 0 1 5	5 6 5	5 6 5 8 7	-55 -55 -45 -20 -4	1 -1 -1	5 5	7 8 7 6	5 6 4 6 5	1 6 5	686 N	. H1 .
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+D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

_	<del></del>	ENR	OUTE	TEM	PERA	TURES	ANO	STAN	OARC	0E V	AI:	0 N 1	N 06	GREE	S CE	LSIU	S FO	R GRI	AT C	RCLE	AIR	ROUTE	5		
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THE BOEING COMPANY TRANSPORT DIVISION

		ENROL	JTE T	EMPE	LATUR	ES AI	NO 5	TANDI	ARU D	)ŁVIA	T 10 N	IN	DE GRE	ES C	ELS 1	us F	OR GE	REAT	CIRCL	E AI	R RO	UTES			
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00--OIFFERINGE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE ATR ROUTES

		ENROU	1 31	EMPE	RATUR	ES A	ND 5	1 A ND	ARO (	EVIA	1 ION	1 N	DEGR	EESC	ELSI	US F	DR GI	EAL	CIRCI	LE AL	IR RO	UTES			
HE IGHT									NROUI	E	1EMP	ERAT	UKŁ									STAND	RO DE	/LATIO	)N
18 1	LSA EMP.	50.0	JANU DSG		DHS	50	APR 050		DBS	50	JUL 050		085	50	0510	BER D/S	oas	50	ANNI	JAL 075 0	185	JAN A	PR JI	JL OC	. T
8t 4GAS1 10 51,000 -5 40,000 -5 50,000 -4 20,000 -4	110.0			-10 5 6	-9 6 7 9		-11 -11 -10 10	-9 6 9 12 12	-8 7 10 13				-13 15 21 21 21	-/1 -54 -55 -9	-15 2 9 12	-12 ·	-11 6 12 14	-70 -52 -55 -10	-14 -	-11 / 13 15	-9 9 15 16	5 4 5 5	292; 5 4 5 5 5	3 5 5	4 5 5 2 2
BENGAS1 TO 53,000 -5 40,000 -5 50,000 -4 20,000 -2		R0 -65 -54 -45 -18 -2	-8 2 -1 5	-6 5 1 5	-5 6 2 6	-62 -56 -41 -15	-6 1 5 6	- 4 5 8 8	-5 5 6 9	-10 -41 -28 -4 12	- 14 9 16 17 16	- 12 11 18 18 18	-11 12 19 19	-67 -55 -59 -12	-10 1 6 9	-8 5 8 11	-7 4 9 12 15	-66 -55 -58 -12	- 10 5 6 9	-7 6 10 12 12	-5 8 12 14 15	\$ \$ \$ \$	581 5 5 5 3	N.MI 3 2 3 2 3 2	3 3 2 2
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+D--DIFFERENCE BETWEEN INDICATED PER CENT KELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

ENROUTE TEMPERATURES	AND ST	TANDARO	DEVIATION IN	DEGREES	CELSIUS	FOR	GREAT	CIRCLE	AIR	ROUTES
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HE IGHT									NROL			PEMA			CELSI	03 1	-	-	••••				DARO DEV	LAT
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ENROUTE TEMPERATURES AND STAND	RO OFFIATION IN DEGREES	CELSIUS FOR	GREAT CIRCLE	AIR ROUTES
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 		ENROL	TE T	EMPE	RATUR	RES A	NO S	TANO	ARO (	EVIA	TION	IN	DEGR	E2 C	ELSI	US FO	)K G	CEAT	CIRCL	EAI	K RO		
HE IGHT	ISA		JANU	ARV			APR		NROU!	E 1	JUL		UR E		OC T O	BER			ANNU	AL	$\dashv$	STANO	ARO DEVIATION
 FEET	TEMP.	50•	050		085	50		075	085	50 0	50		085	50	050 (	075 0	85	50	050 0	75 0	8.5	JAN	APR JUL OCT
8ERL1N 53,000 40,000 30,000 20,000 10,000	TO KEFL -56.5 -56.5 -44.5 -21.2 - 4.6	AV1K -58 -58 -52 -29 -13	-1 -1 -8 -8	2 3 -5 -4	5 -3 -2 -3	-51 -52 -49 -26 -10	5 -4 -5 -6	8 9 -1 -1 -2	9 12 0 0	-47 -48 -43 -17 -2	10 8 1 4 5	12 12 4 6 5	13	-56 -55 -46 -22	1 2 -2 -1 -2	6 1 3 1	5 8 3 5 3	-53 -53 -47 -24 -8	5 -3 -2 -3	7 8 1 1 0	9 11 2 3 2	5 6 6 5	1305 N.M1. 4 3 4 7 6 6 4 4 4 5 4 6 5 5 5
53.000 •0.000 30.000 20.000	TO LISS -56.5 -56.5 -44.5 -21.2 - 4.6	ON -58 -58 -49 -24 -8	-1 -2 -4 -5 -3	2 2 -2 0 0	-0 2 2	-56 -57 -47 -21	1 -1 -2 1	4 3 1 3 3	5 2 5 5	-54 -53 -39 -12	2 4 6 9	4 7 8 11 11	6 8 9 12 12	-59 -56 -43 -16 -1	-3 0 2 5	-0 3 5 8 6	5 6 9 8	-57 -56 -44 -18 -2	-0 0 0 3 3	3 4 6	6 6 8 8	5 6 4 5 5 5	1246 N.MI. 6 5 6 6 5 6 6 5 6 6 3 6 6 3 6
8ERL 1N 53.090 40.000 30.000 20.000 10.000	TO LONO -56.5 -56.5 -44.5 -21.2 - 4.6	ON -57 -58 -51 -27 -11	-0 -2 -6 -6	3 2 -4 -2 -3	5 -2 0 -1	-54 -55 -48 -23 -7	5 1 -4 -2 -2	6 6 -1 1	7 8 0 3 2	-50 -51 -41 -14	7 6 4 7 6	9 9 6 9 8	10 11 7 10	-57 -56 -44 -19	-1 0 0 2	2 4 3 6 4	5 4 8 6	-54 -55 -46 -21 -5	2 1 -2 0 -1	5 6 2 4 3	78465	5	515 N.HI. h 3 h 6 5 5 h h h 5 3 5 h 3 5
8EHL 1N 53,000 40,000 30,000 20,000 10,000	TO MAOR -56.5 -56.5 -44.5 -21.2 - 4.6	10 -57 -58 -49 -25 -8	-1 -2 -5 -4	2 -2 -0 -0	-1 2 2	-55 -57 -47 -21	-1 -2 0 0	5 0 5 3	6 5 2 4 4	-54 -53 -39 -13	3 4 5 9	5 7 8 11 10	6 9 9 12 12	-59 -56 -43 -17 -1	-2 0 2 4 3	0 5 4 7 6	1 5 6 9 8	-56 -56 -45 -19	0 0 -0 2 2	3 6 5	5 6 5 8 7	5 6 5 5	1000 N.M1.
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53.000 40.000 30.000 20.000	TO PARI -56.5 -56.5 -44.5 -21.2 - 4.6	-57 -58 -51 -27		3 -4 -2 -3	5 4 -2 0 -1	-54 -56 -48 -23 -6	5 1 -3 -1 -2	5 5 -1 2	7 7 1 3	-50 -51 -41 -14 2	6 5 4 7 6	8 9 6 9	10 10 8 11	-58 -56 -44 -18 -3	-1 0 1 3	1 3 3 6 5	5 5 8 6	-55 -55 -46 -20 -5	2 1 -1 1	5 5 2 4 3	7 8 4 6 5	5 6 6	465 NoM1. h h h 6 5 5 h h h 5 3 5 h 3 5
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53,000 40,000 30,000 20,000	TO ROME -56.5 -56.5 -44.5 -21.2 - 4.6	-56 -58 -51 -27	-6 -5	2 -3 -2 -2	-2 0 -0	-55 -57 -47 -22 -6	-0 -3 -0 -1	3 -0 2 2	6 5 1 4 5	-53 -52 -39 -13	5 5 8 8	8 8 10	7 9 9 12 11	-59 -56 -43 -17 -2	-2 0 1 4 3	0 3 4 7 6	2 4 5 8 7	-55 -56 -45 -20 -4	1 1 -1 2	5 3 5 4	5 7 5 7 6	5 5 5 5	661 N.M1. h
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53,000 40,000 30,000 20,000	TO SHAP -56.5 -56.5 -44.5 -21.2 - 4.6	-57 -58 -51 -27	-6 -6	3 -5 -2 -2	5 -2 1 -0	-55 -55 -48 -23 -7	- 5	6 6 -1 1	7 9 1 3 2	-69 -50 -61 -15	7 6 3 6 5	10 10 6 9	11 12 7 10 9	-57 -56 -44 -19	2	3 6	6 4 7 6	-54 -55 -46 -21 -5	- 1 0	6 6 2 4 3	? 9 4 6 5	5 6 6 5	610 N.M1. 4

\*\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSTUS FOR GREAT CIMCLE ATR ROUTES

		ENROU	TE I	EMPE	RATU	RES A	NU S	IANU	AMD I	JEVIA	VIATION IN DEGREES CELSIUS FOR GREAT CIMCLE A									IR R					
HE 1GHT	ISA		JANU	ADV			APR		NROU	E	TEMP	EHAT	URE	_	OCTO	BER			ANN	UAL		STAN	DARD	DEVIA	T10N
FEET	TEMP.		05G			50	050		085	50	050		085	50	050	075	085	50	050	075	D85	JAN	APR	JUL	100
40,000 30,000 20,000	-56.5 -56.5 -44.5	-57 -59	-1 -8 -9	5 1 -5 -5	14 - 15 - 14	-53 -54 -50 -25 -9	5 -5 -4 -5	6 7 -3 -0 -1	A y -1 1 1	-47 -50 -42 -15	7 5 6	11 10 5 8 7	12 12 7 9	-56 -56 -46 -20 -6	0 1 -1 1	5 4 2 4 2	6 3 6 4	-55 -55 -47 -25 -8	5 2 -5 -2 -5	6 6 1 2 1	8 9 5 4 5	5 6 6	4 6 4 5	57 N 5 5 4 5	.HI.
BEML 1N 53,000 40,000 30,000 20,000 10,000	-56.5 -56.5 -44.5 -21.2	-57 -57 -51 -26 -11	-0 -1 -6 -5	5 -4 -2 -5	5 -5 0 -1	-55 -55 -46 -20 -4	  -2   	1 1 to 1	5 6 2 6 5	-55 -48 -56 -10	1 8 9 11 10	11 11 13 12	5 12 13 14 15	-59 -56 -43 -17	-2 1 2 4 5	1 5 4 7	2 5 6 9 8	-56 -54 -44 -18 -3	0 2 1 5	5 5 7 5	8797	5 5 6	18 5 4 5	3A8 N 5 4 5 5	.H1 .
BEML1% 53,000 40,000 30,000 20,000 10,000	TG 1EL -50.5 -50.5 -44.5 -21.2 - 4.6	AV1V- -57 -57 -50 -25 -10	JAFF -1 -0 -6 -4	2 3 -3 -1 -2	-2 1 -1	-56 -56 -46 -20	0 0 -2 1	5 1 1 4	6 2 5 5	-58 -49 -35 -10 5	-2 8 9 11	1 10 11 13	2 12 13 14 13	-60 -56 -42 -16	- h 0 2 5	-1 3 5 8 7	6 9	-58 -54 -45 -18 -2	-1 2 1 5	1 6 5 7 6	3 8 7 9	5 3 5 5	15 5 4 4	545 N 5 4 5 3	.H].
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64	1	ENROUTE LEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTE														OUTES									
HE 1 GHT	15A			JANUARY APRIL JULY OCTOBER ANNUAL  1050 D75 D85 50 D50 D75 D85 10 D50 D50 D75 D85 10 D50 D50 D50 D50 D50 D50 D50 D50 D50 D5													STANGARD DEVIATION								
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BERMUDA 55,000 40,000 50,000 20,000 10,000	10 RANG -50.5 -50.5 -44.5 -21.2 - 4.0		-14 0 4	-12 5 6 10	-11 -11 -11	-69 -50 -57 -11		-11 5 9 12	- 10 5 10 13	-71 -54 -54 -7 10	- 14 5 11 14	- 12 4 12 15 16	-11 % 15 16	-72 -54 -55 -8	-16 2 10 13	1-14 4 12 14 15	-15 5 12 15	-71 -55 -56 -10	-14 1 8 11	-12 5 10 15	-11 4 11 14	5 5 2 2	3 2 2 2 2	169 N	.H1. 5 5 2 2
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0,000 -50-5 -57 -0 2 3 -57 -1 2 5 -57 -0 1 2 5 -55 1 5 5 -50 0 2 5 3 5 2

50,000 -44-5 -40 5 7 8 -59 6 8 9 -54 11 12 12 -55 10 12 13 -57 8 10 11 3 3 2

20,000 -71-7 -12 9 11 12 -11 10 12 15 -7 14 15 16 -8 15 15 16 -10 12 15 14 3 5 7

40-01FFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATHOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT OLVISION

		ENRO	UTE	TEMP	ERATI	JRES	AND	STAN	DAKO	ULVI	ATIO	N 1N	OFCI	REES	CELS	IUS	FOR	GREAT	CIR	CLE	AIR F	OUTES	
HE1GHT	1SA		NA Au	DARY			ENROL	JTE	PERA	TURE									STAN	DARO DEVIATION			
FEET	TEMP.	50			085	50	050	RIL D75	085	50	JU 050		085	50		OBER 075		50		NUAL 075	D85	JAN	APR JUL OCT
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30,000	-44.5	-46	-2	í	2	-58	-0	3 2	5	-55 -58	2 7	5	10	-56	1	5	8	-57	-0	5			4 3 4
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40.000	-50.5	-58	- 1	1	5	-58	-1	1	2	-50	0	2	2	-55	1	3		-57	-0	- 10	3	1	3 2 4
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20.000	-44.5	-36 -10	6	H	9	- 57	8	9	10	- 54	10	11	12	-54	11	12	15	- 56	9	11	12	5	2 2 2
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40.000	-50.5	-54	1	49	6	-54	5	5	0	-54	2	4	5	-72 ·	2		-13	-73	-16 ·	- 14	-12	5	3 3 5 5 5 2
20,000			14	12	15	-53 -7	11	15	14	-10	10	12	12	-55	12	15	15	-54	11	15	13	2	2 2 2
10,000			13	14	15	ø	12	14	14	7	11	12	13	8	13	14	15	-8	12	14	16	2	2 2 2
BEHNUDA									- 1														2668 N.M1.
55,000			-5 -1	-1		-57 -57	-1	2		-57	-0	2	5	-60		-1	0	-59	-2	1	2		
50,000	-44.5	-46	-2	- 1	2	-45	-0 -1	2		-54 -58	2		10	-55 -41	3	8	7	-56	1 2	5	Ŷ	6	0 4 5
			-0 -2	. 5	5	-20 -4	1	5		-12	10	12	13	-15 -0		9	11	-17	4	7	0 7	5	5 5 4
BEMMUDA			•	-	1	-	•	•		•				-0	•	•	95	-2	,	0	- 1	٥	4 5 4
53,000	-56.5	-65	-7	-4	- 5	-61	-4	-2	-1	-65	- 7	-4	-3	-65	-9	-6	-5	-65	-7	-4	-2	14	978 N.MI.
40,000	-56.5	-57	-1	3	5	-57 -44	- 1	5	4	-55	-1	5	- 4	-55	1	4	5	-50	0	2	- 4	5	5 5 4
20.000	-21.2	-20	2	5		-18	1	5	8	- 35 -9	12	11	12	- 59 - 15	5	8	15	-41 -15	7	7	11	4	5 5 4
10,000	- 4.6	-6	-1	2	•	- 5	2	5	•	•	11	12	13	5	7	10	ii	ő	5	8		5	2 1
BERMUDA					_	_																	1518 N.M1.
55.000	-56.5 -56.5			-10		-74 ·		-15 ·	- 14	-71	-14 -	- 15 -	-12	-75 ·	-18		-15	-73 ·	-17 ·	-15 5	-14	5	5 2 5
30,000	-44.5	-57	8	9	10	-55	¥	11	11	-54	10	12	12	-35	11	13	14	- 55	10	11	12	2	2 2 2
20,000	- 4.6	-9	11	13	15	-0	15		13		14		16	-7 8	15 13		10	-8	13		15	2	2 2 2 2 2 1 2
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\*O--OIFFERENCE BETWEEN INCICATEO PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVSATION IN DEGREES CELSIUS FOR GREAT CORCLE ASR ROUTES

		ENROUT	E 18	MPER	ATUR	SA	10 S	OFA	ARD D	EVSA	1104	IN	DEGRE	E 5 C	ELSI	US F	OR GR	EAT	SRCE	E A					
HE 1GH1	1 SA		ANUA	RY			APR		HROUT		JUE	Y			OCTO				ANNU			STAND			
	EMP.			75 D	85	50 (	350 (	275	085	50	1/50	075	DBS	50	050	D75 I	085	50 (	50 D	75 (	085	JAN .		JUL	00.1
40,000 - 50,000 - 20,000 -				.C. -7 2 3 7	5 .	-65 -58 -42 -15 -0	-6 -2 2 6	-4 1 4 8 7	-5 5 10 8	-65 -56 -35 -8	-8 1 10 15	-6 2 11 15 13	-5 3 12 15	-67 -56 -38 -11	-11 1 7 10 9	-8 5 9 12	-7 5 10 13 32	-65 -57 -40 -15	-9 -0 5 8 7	-6 2 8 13	-14 9 12 10	5 5 4	5 4	717 N 3 2 2 2 2	1. M3. 4 5 3 5
10.000 - 10.000 - 20.000 -	MANILA -56.5 -56.5 -44.5 -21.2 - 4.6		-25 - 2 14 17 15	15 18	4 .	-80 -52 -31 -5	-24 - 5 14 16 15	-22 6 15 17	-21 7 15 18 17	-78 -54 -31 -5	-22 2 14 16	-20 4 15 17 15	-18 15 17 16	-80 -54 -31 -6 10	-25 2 13 16 15	-21 · · · · · · · · · · · · · · · · · · ·	-20 4 15 17 16	-80 -54 -51 -5	25 - 5 14 16 15	21 - 5 15 17 16	-20 6 15 38 17	5 2 2 1	3 2 2 2 2 2	301 A 5 2 2 1	1.#1. 3 2 1 1
40.000 - 50.000 - 20.000 -	POK1 M -56.5 -56.5 -44.5 -21.2 - 4.6	-82 - -83 - -53 - -10		15 18	5	-80 -52 -51 -5	-24 · 5 · 15 · 16 · 15	-22	-21 7 15 17 17	-78 -54 -32 -6	-22 2 13 15 14	-20 3 14 16 15	-14 15 17 15	-80 -54 -52 -6 10	-24 2 !3 16 14	-22 5 14 17 15	-21 4 15 17 16	-80 -54 -51 -5	-24 - 3 15 16 14	-22 5 14 17 16	-20 6 15 18 16	5 2 2 2 2	2 2 2 2	924 7 3 2 2 1	3 2 2 1
10.000 20.000	0 FT. -50.5 -56.5 -44.5 -21.2	-74 - -56 -38 -10			5	-71 -55 -57 -9	+15 1 8 12 10	-15 5 9 15	-12 4 10 14 15	-11 -51 -55 -1	-14 -0 11 14 15	- 13 1 12 15 14	-12 1 15 16 16	-75 -55 -34 -7 8	-19 2 11 15 13	-16 3 12 16 14	-15 13 17 15	-75 -56 -55 -8 -1	- 16 · · · · · · · · · · · · · · · · · ·	- 14 2 10 15 13	-14 5 11 15	5 5 2 2 2	5 5 2 2 3	53 1 1 1	N.M1. 3 2 2 2 2
10.000 20.000	0 MIAI -50.5 -50.5 -46.5 -21.2 - 4.6		-17 · · · · · · · · · · · · · · · · · · ·	-15 - 2 8 15	5	-/1 -55 -5/ -4	- 15 - 1 - 8 - 12 - 11	-15 3 9 15 12	-12 4 10 14 15	-71 -57 -55 -7	-14 -0 11 14	- 15 1 12 15 14	-12 1 13 16 14	-/5 -55 -54 -6 8	-1v 2 11 15	-17 3 12 16 14	-15 4 13 17 35	-75 -56 -55 -8	- 36 · · · · · · · · · · · · · · · · · ·	-15 2 11 15 13	-14 5 11 16	5 5 2 2 2	5 5 2 2 5	1 1 1	N.MI. 3 2 2 2
10,000	-54.5 -56.5 -44.5 -21.2	5AU -74 -56 -38 -10	-17 1 7 11	-16 - 2 8 13	15 5 9 14 15	-71 -55 -36 -9	- 15 	-15 5 9 14 12	-12 4 10 14 15	-71 -57 -55 -7	-14 -0 11 14 15	-15 1 12 15	-12 1 13 16 14	-15 -55 -11 -6 -8	11 15	-17 3 12 16 14	-15 4 13 17 15	-/5 -56 -55 -8 /	- 16 1 9 15 12	- 15 3 11 15 13	-14 3 11 16 15	5 5 2 2 2	5 5 2 2 2	106 1 1 1	N.H1. 5 2 2 2
20,000		-56 -58 -51	1 -1 -6 -5	4 2 -4 -2 -2	6 4 -2 0 -1	-55 -57 -47 -21 -5	1 -1 -2 0 -0	4 5 0 5 2	1 4	-54 -51 -58 -12	2 6 6 9 8	8 9 11	5 10 10 12	-59 -56 -42 -16	0 2 5	-0 3 5 7	1 4 6 9 8	-50 -50 -45 -19 -3	0 1 -0 2	5 4 6 5	1 6 H	5 4 5 5	5 4 4	291 3 4 5 5	N.M 5.
40,000 50,000 20,000	VIENN -56.5 -56.5 -44.5 -21.2 - 4.6	-56 -58 -51 -27	-2 -1 -6 -1	4 2 -4 -2 -5	6 4 -2 -0 -1	-54 -57 -48 -22 -6	2 -0 -5 -1	5 5 -0 2	6 5 1 4 5	-52 -51 -59 -13	5 5 8 7	8 10 9		-58 -56 -45 -17 -2	1	1 5 4 7	2 4 5 8 7	-55 -56 -45 -20	1 -1 -1 0	4 5 5 8	5 1 6	5 4 5 5	5	1 4 5 9 14 14 3	
40,000 50,000 20,000	ONTEIN -56.5 -56.5 -44.5 -21.2 - 4.6	-65 -53 -37 -10	PE 1 -8 -3 -8 12 12	0#N -6 6 10 15	-4 8 11 14 15	-65 -55 -38 -12	-8 1 6 9	-6 4 8 11 12	5 9 12 15	-58 -52 -42 -17 -0	-2 is 2 is	5 6	8	-62 -53 -59 -13	5 6	-5 6 8 11	-1 8 10 12 12	-62 -53 -59 -13	-6 5 6 8	-2 6 8 13	-0 7 10 12 13	4 4 5 5 5 5 5	4 3 5 5	485	14 14 15
BLOEM FO 55.000 40.000 30.000 20.000 10.000	ONTLIN -50.5 -50.5 -44.5 -21.2	-65 -53 -36	-9 5 8 12	0N00 -6 6 11 14 15	12 15 16	-65 -55 -38 -12	-9 1 6 9	-6 4 8 11 12	-5 5 10 12 13	-54 -52 -42 -16	5		, , , , , , , , , , , , , , , , , , ,	-62 -53 -56	6	B 11	-2 H 10 12	-65 -55 -54 -12 5	-6 3 6 9	-5 6 9 11 12	-1 8 10 12 55	4 5 5 5	4 5 5 5		
	-56.5 -56.5 -44.5 -21.2	-69 -52 -34	-12 4 11 14	-10 7 13 15	RG -8 8 14 16	-68 -54 -57 -10	11	13	11	-61 -52 -59 -14	6	, 7 6	8 9 11	-65 -5: -5:	5 4 7 8	10	14	-66 -55 -57 -10 6	-9 4 8 51 11	-6 11 13 13	14	4 4 3 2 2	3 2 5		
	-56. -56. -44. -21.	5 -65 5 -55 5 -56 2 -10	-8 3 8 12	-6 6 10 13	8 14 12 14 15	- 65 - 55 - 38 - 12	6	H 11	10 12	- 58 - 52 - 42 - 17 - 0			7 B	-62 -5: -3!	9 6	8 11	10 12	- 59	6	-2 6 8 11	10 12	4 4 5 5 5 5 5	4 5 5	1	5 5 5 4
	-56. -56. -44. -21.	5 -78 5 -55 5 -32 2 -4	3 13 17	5 14 18	-18 6 15 19 16	-11 -52 -30 -4	14	16	17	- 5: - 5:	} ? 1	5 11 5 11	4 15 4 15	-5 -5 -	1 14	5 4 4 15 5 1 <i>i</i>	16 17	-55 -51 -6	16	35 17	16	5 5 2 2 2	3 2 2 2 2 2		N.MI. 5 5 2 2 2 2 2 2 2 2
90G0TA 53,000 40,000 50,000 20,000 10,000	-56. -56. -44. -21.	5 -14 5 -55 5 -55 2 -6	-18	-15 6 15	14 18	-5: -5:	5 L	2 1	6 17	-5 -3	5	9 1 0 1	6 <i>1</i> 1 12 1 12	-5 -3	5 1	5 5 1 1 4 15 2 10	5 14 5 16	-53 -31 -6	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 5 1 1 5 1 4	5 16 5 16 6 15	3 3 2 2		2	N.MI. 5 5 5 3 2 2 2 2

.O -- DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

		ENROU	16 1	EMPE	RATUR	ES A	NO S	TANO	ARD (	EVIA	1100	11	OE GRE	ES C	ELSI	US F	OR GF	REAT (	IRCL	E A	IR RO				
HE 1GHT	15A		JANU	AR Y	- 1		APR	IL	NKOU		JUL	٧			OCTO			•••	ANNU					DEVIA	061
FEET	TEMP.			075	085	50	050	075	DBS	50	050	075	085	50	US 0	075	285	50 0	50 0	175 (	283	JAN	APR	JUL 554 N.	
80G0TA 53,000 '40,000 30,000 20,000 10,000	10 CARA -50.5 -50.5 -44.5 -21.2 - 4.6	-78 -54 -55 -5	-21 5 12 16 16	-20 4 15 17	-19 5 14 18	-78 -52 -50 -5	-21 5 14 17 14	-19 6 15 18 16	-18 7 16 18 16	-75 -55 -52 -7	-17 1 12 14 16	~15 13 15 15	-14 14 16 16	-78 -54 -51 -6 10	~21 3 14 16 15	-19 - 4 15 17 16	16 15 17 16	-77 - -54 - 52 -6 10	-20 3 15 16 14	18 - 5   14   17   15	-17 6 15 18 16	3 2 2 2 2 2	3 2 2 2 2	3 2 2 1 2	3 2 2 1
80G01A 53,000 40,000 30,000 20,000 10,000	TO CHIC -50.5 -50.5 -44.5 -21.2 - 4.6		-16 1 6 10 8	-14 3 8 12 10	-15 6 9 15	-71 -55 -36 -10	- 16 2 8 12 10	-12 4 4 13 12	-11 5 10 14 13	-70 -55 -35 -7	-14 1 11 16 15	-12 2 12 15 14	-11 3 13 16 16	-74 -55 -34 -8	-17 2 10 14 12	-15 - 3 12 15 14	-14 13 16 15	-72 -55 -56 -9	-15 - 1 9 12 11	15 · 3 11 14 12	-12 h 11 14 15	3 2 3 3 3	5 2 5 5	355 N 2 2 2 1	2 2 2 2
8040TA 53,000 40,000 30,000 20,000 10,000	10 OAKA -50.5 -50.5 -44.5 -21.2 - 4.6	-78 -56 -56 -7	-21 -3 11 14	-19 h 12 15 14	-18 5 13 16	-78 -55 -31 -6	-21 5 15 15	-19 5 14 16 15	-18 6 15 17 15	-76 -56 -55 -7	- 17 2 12 14 14	-16 3 13 15	~15 4 15 16 15	-78 -53 -51 -6 10	-21 5 15 16 14	-19 ·	-16 5 15 17 16	-77 -54 -32 -6		15 16 15	-17 5 16 17 15	3 2 2 2	2 2 2	396 N 3 2 2 1	2 2 1
8060TA 53,000 40,000 50,000 20,000 10,000	TO UENE ~50.5 ~50.5 -44.5 -21.2 - 4.6	-68 -57 -41 -14	-11 -0 5 7	- 0 3 5 9 H	-7 6 10 10	-66 -57 -59 -15	-10 -0 5 8 7	-6 5 7 10 9	-6 h H 11 10	-65 -55 -56 -9	-9 2 9 12 11	-7 10 16 15	-6 5 11 14 15	-69 -55 -36 -10 5	-12 1 8 11 10	-10 3 10 13	-9 11 14 12	-67 -56 -58 -12	-10 1 6 10	-8 3 9 12 11	-7 10 13 12	3 3	3 5 5 5 5	792 N 3 3 2 2 2	3 3 3 5 2
80601A 55,000 40,000 50,000 20,000 10,000	TO GUAT -56.5 -56.5 -44.5 -21.2 - 4.6	TEMALA -7H -5% -33 -6	-21 -21 3 11 15	7 -19 -12 -17 -15	-19 5 13 17 15	-77 -52 -51 -5	-21 6 15 16	-19 6 14 18	~1d 6 15 16 16	-74 -55 -55 -7	- 17 1 12 16 16	-16 2 15 15	-15 5 16 16	-78 -54 -51 -6 10	-22 5 15 16 15	-20 h 1h 17 16	-19 h 15 17	-77 -54 -52 -6 10	-20 - 3 12 16 14	-16 4 14 17 15	- 17 5 14 16	3 2 2 2 2 2	5 2 2 2 2	154 N 2 2 2 1	.H1. 3 2 2 1
8060TA 53,000 40,000 30,000 20,000 10,000	10 GUA: -56-5 -56-5 -44-5 -21-2	7AQU16 -79 -59 -52 -6	-25 5 15 17	-21 % 1% 18 15	-20 5 14 17	-7H -52 -50 -h	-21 5 16 17 14	-19 7 16 18 16	~18 8 16 19 10	-74 -55 -52 -7	-17 2 15 14	-15 3 16 15	-14 4 15 16 15	~77 -54 -51 -6 10	-21 2 14 16	-19 h 15 17 16	-19 16 17 16	-77 -54 -51 -5	-20 5 15 16	- 18 - 5 - 15 - 17 - 15	-17 6 16 18 16	2 2 2 2	5 5 2 2 2 2	5 56 N 5 2 2 1 2	2 2 1
8060TA 51.000 40.000 50.000 20.000 10.000		ANA -77 -54 -5. -7	-21 2 10 15	-1v	-18 5 12 17 15	-76 -53 -32 -6	-20 6 12 16 13	13	-17 0 19 17 15	-73 -56 -33 -7	-17 1 12 16 16	-15 2 13 15	-1 h 5 15 10 15	-78 -54 -52 -6 10	~21 5 15 16	-19 16 16 15	-1H 4 15 17 16	-10 -56 -55 -6	-14 - 2 12 15 14	-17 4 15 16 15	-16 5 14 17	2 2 2 2	2 2 2 2	199 N 2 2 2 1	3 2 2 1
80601A 53,000 60,000 50,000 20,000 10,000	-56.5 -44.5 -21.2	-76 -55 -56 -8	-19 2 9 13	-18 -16 -15	-17 6 11	-75 -54 -34 -7 H	-18 5 11 16	12 16	12 16	-73 -56 -33 -7	-16 1 12 15 14	- 15 13 15 15	-14 2 13 16 15	-17 -54 -52 -6 10	-21 2 12 15	13	-18 h 14 17 16	-55 -54 -7	-19 2 11 14 - 15	-17 4 12 16 15	-16 13 16 15	5 2 2 2 2	3 2 2 2 2 2	1917 A 2 2 1 1	3 2 2 2 2
60G0TA 55,000 60,000 30,000 20,000 10,000	-50.5 -66.5 -21.2	-7H -54 -55	-21 3 11 15	12	-18 5 13 17 15	-/7 -52 -51 -5	1.5	14	15 18	-75 -55 -55 -7			1.5 1.6	-78 -54 -51 -6 10	-21 5 15 16	14	-18 15 17 16	-76 -54 -12 -6	-20 3 12 15	-16 6 15 17 15	-17 5 16 17 15	2 2 2 2	5 2 2 2 2	2 2 1	3 2 1 1
80G0TA 55.000 60.000 50.000 20.000	-56.5 -44.5	-78 -55 -32	15 17	5 14	-18 6 15 19 16	-77 -52 -11 -h	5 16 17	, 7 16	16 10	-72 -54 -52 -8	12	16	15	-75 -54 -31 -6 10	15 15	15	-15 5 16 17 16	-75 -55 -51 -6	-17 5 15 15	-16 6 15 17	- 15 7 16 18 16	3 3 2 2 2	2 2 2	1520 5	3 2 2 2 2
53,000 40,000 30,000 20,000	70 L1M ) -56.5 ) -56.5 ) -44.5 ) -21.2	-7H -54 -52	15	16	15 14	-11 -52 -30 -6	14	16	14	- 7 5 - 5 6 - 5 2 - 8	12	14	15	-76 -54 -51 -6	15 15	15 17	16	-76 -53 -51 -6		15	7 16 18	3 5 2 2 2 2	5 5 2 2	1022	N.M1. 3 2 2 2 2
53,000 40,000 30,060 20,000	-50.	5 -71 5 -56 5 -39 2 -12	9 9	11	8	-70 -50 -37 -10	,	1 :	2 15	- 54 - 35	10	1	12	-55 -55 -6	10	11	12 15	-55 -56 -10	12	10	11	5 5 5	3 h 2 3 2	2 2 2	5 2 2 2
80G016 55,000 40,000 50,000 20,000	0 -56. 0 -64. 0 -21.	5 -71 5 -59 5 -59 2 -10	-11	) /   1	3 5 3 9 5 14	-55 -56	5 6 9 1	6 -10 2 8 1 5 1 5 1	0 10 4 15	-5 -5	5 1: 6 1	1 :	5 14	-50 -50 -1	. :	1 12 4 15	15	-55 -35	10 13	11 14	12	3 3 3	2 2	2 2 1	2 2 2 2
80G01 53,00 60,00 30,00 20,00	0 -44.	5 -7 5 -5 5 -3	2 1	2 -2 5 1 7 1 5 1	6 14 6 19	-5 -3	2 0 1	5		-5 -3	4 2 1 7 1		5 15	-5 -3	0 1 5 1 0 1	4 16 6 11 5 16	16	-5 5 - 3 1 - 5	1 14	15 15 16	16				2 2 1 2 2

\*D--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

		ENRUL	JIE I	FMPE	KATU	KES A	IND S	SIANO	ARU	DEAL	1110	N IN	DECK	FF2 (	FFZ	105 1	OK G	KEAI	CIRC	LE	IIK K	בשוטט			
HEIGHT IN FLEI	ISA TEMP.	504	JANE 050		085	50	APR		NR DU 085		JUL	0/5		50		08ER 075	085	50	ANN 050	UAL 0/5	085			UL OC	
80401A 54,000 40,000 50,000 20,000	TO MEXI -50.5 -50.5 -44.5 -21.2 - 4.6	-71 -54 -54 -6		-17 4 11 16 14	-18 5 12 17 15	-77 -55 -52 -5 10	-20 3 12 16	-1d 5 13 17	-17 6 14 18 16	-74 -56 -55 -7	-17 1 12 15 14	-16 2 13 15	-15 5 14 16	-78 -54 -32 -6 10	-22 5 15 16 15	-20 4 14 16 16	-19 15 17 16	-71 -54 -35 -6 9	-20 2 12 15	- 16 4 13 17 15	-17 5 14 17	5 2 2 2 2	170 3 2 2 2 2 2	2 2 1	3 2 2 1
80GDTA 55,000 40,000 50,000 20,000 10,000	10 M1AP -50.5 -50.5 -44.5 -21.2 - 4.6	-/7 -54 -55 -7	-20 2 10 14	-18 4 11 10	-18 5 12 16 14	-76 -53 -51 -6	-14 3 12 15	-17 5 15 16 14	-17 6 15 17 15	-73 -56 -55 -7	-16 1 12 14 14	- 15 2 13 15 15	~14 3 13 16 15	-71 -54 -52 -6 9	-21 2 13 15	-19 4 14 16 15	-18 14 17 16	-76 -54 -55 -6	-19 2 11 15 15	-17 4 13 16 14	-16 5 14 16 15	3 2 2 2 2 2	151: 3 2 2 2 2 2	2	3 2 2 1
80G01A 53,000 40,000 50,000 20,000 10,000	FO NEW -50.5 -56.5 -44.5 -21.2 - 4.6	ORELA -/6 -55 -35 -8 /		-18 3 10 15	-17 4 11 16 14	-15 -54 -34 -1	-18 3 11 14 15	-16 4 12 16 14	-15 5 13 16 15	-/3 -56 -35 -/	-16 T 12 15	- 15 2 13 15 15	-14 2 13 16 15	-77 -54 -52 -6	-21 2 12 15 14	-19 4 13 16 15	-18 14 17 16	-15 -55 -34 -7	-19 2 11 14	- 17 4 12 16 14	-16 4 13 16 15	5 2 2 2 2	1756 3 2 2 2 2 2	1	3 2 2 2 2 2
HOGO FA 5 3,000 4 0,000 50,000 2 0,000 1 0,000	TO NEW -50.5 -50.5 -44.5 -21.2 - 4.6		-16 1 7	-14 5 8 15	-15 4 7 15	-71 -55 -36 -4 5	-15 1 8 12 10	-15 5 10 15 12	-12 h 11 14	-10 -56 -54 -1	- 14 - 1 - 11 - 14 - 15	- 12 2 12 15 14	-11 3 15 16	-74 -55 -56 -7 8	-11 2 11 14 12	-15 4 12 15 14	-14 4 15 16 14	-12 -55 -35 -9	-16 1 9 15	-14 5 11 14 12	-12 4 12 15	5 5 2 5 5	215 3 3 2 2 3	5 5 5	3 2 2 2 2 2
80401A 53.000 40.000 50.000 20.000 10.000	TO PANA -50.5 -50.5 -44.5 -21.2 - 4.6		-21 5 12 16	-20 4 13 17 15	-14 5 14 10	-77 -52 -51 -4	-21 5 14 17	- 19 6 15 18 15	-1d 7 16 19	- 14 -55 -52 -1	-17 1 12 14	-16 5 15 15	-15 14 16 16	-78 -54 -51 -5	-22 2 14 16 15	-20 4 15 17 16	-19 15 17 16	-77 -54 -52 -5 10	-20 5 15 16	-18 5 14 17	-17 6 15 18 16	3 2 2 2 2	\$ 00 2 2 2 2	8 NoH1 3 2 2 1 2	3 2 2 1
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+0--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENHOUSE SEMPERATURES AND STANDARY DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

			ENHOL	JIE 1	EMP	RATU	RES A	NO S	IANL	ARE (	DEVIA	110N	IN	OE GRE	ES C	ELSI	US F	OR GI	REAT	CIRC	LE A	- 1				
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\*D--DIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-7177

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR HOUTES

	EMMODIE	TEMPERAL	URES AND	STANUARE	DEVIAL	ION IN	DEGREE	S CELS	IUS FOR	GREAT	CIRCLE AIR	ROUTES	
HEIGHI IN ISA		UARY		PRIL		JULY	T	octo	DER		ANNUAL	STAND	CARO DEVIATION
FEET TEPP.		075 UHS	50 05	0 075 085	50 1	50 075 (	085	50 050		5 50 (	50 075 085	JAN	APR JUL OCI
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80M8AY 10 1R16 53-000 -56-5 40,000 -56-5 30,000 -44-5 20,000 -21-2 10,000 - 4-6	-68 -11 -54 2 -41 3 -16 6	-9 -8 5 6 5 7 8 9 7 8	-67 -10 -54 -58 6 -12 5	6 7 6 8 10 7 11 12	-47 -27 -4	9 11 17 19 18 19	20 -	70 -14 55 2 36 9 10 12 7 12	-11 -10 4 5 11 12 13 14 15 14	-53 -36 -10	15 - 10 - 9 4 7 9 9 12 14 11 14 16	5 4 4 5 5 5	3283 NoM1. 3 3 3 4 3 3 5 5 3 5 5 2 2
80M8A V TO 1UNI 53,000 -56.5 40,000 -56.5 30,000 -44.5 20,000 -21.2 10,000 - 4.6	5 -66 -9 -55 2 -43 2 -17 4 -1 3	-7 -5 5 6 4 5 6 7	-65 -8 -55 2 -40 4 -14 8	5 7 7 8	-47 -28 -4	9 12 16 18 17 19	16 -6 13 -9 19 -1 20 -1	5 2	-9 -8 4 5 10 11 12 13 12 13	-53 -37 -12	11 -8 -6 4 7 9 7 11 13 10 13 15 10 13 15	3 3	5424 N.H1. 5 3 4 5 3 5 3 5 5 5 2 5
80M8AV TO ZURT 55,000 -56.5 40,000 -56.5 50,000 -48.5 20,000 -21.2 10,000 - 4.6	CH -62 -6 -56 1 -46 -1 -21 0 -5 -1	-3 -1 4 5 2 3 3 5 2 4	-61 -5 -55 2 -42 2 -16 6 1 6	-2 -1 5 7 5 6 8 10 8 10	-48 -31 1 -6 1	9 11 5 16 5 17	-4 -6 13 -5 17 -3 18 -1	5 1	-5 -4 4 5 8 9 10 12	-63 -53 -39 -14 2	-6 -4 -2 3 7 9 5 9 11 7 11 13 7 10 12	4 5	3520 N.H1.
BUNATRE 10 CUR. 55,900 -50.5 40,000 -56.5 50,000 -44.5 20,900 -21.2 10,000 - 4.6	ACA0 -78 -21 -54 3 -35 11 -6 15 -7 15	-19 -18 4 5 12 13 16 17 16 15	-78 -21 -52 & -11 13 -5 16 7 14	-19 -19 5 0 14 15 17 18 15 10	-73 -1 -55 -33 1 -7 1 9 1	1 2 1 13 1 4 15 1	14 -7 3 -5 13 -3 16 -	4 3 1 13 6 16	19 -18 4 4 14 15 17 17 15 16	-54 -32 -6	20 -18 -17 3 4 5 12 14 14 15 16 17 4 15 15	3 3 2 2 2 2	40 N.H1. 3 2 3 2 2 2 2 2 1 2 1 1
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+0--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177 PAGE 69

ENROUTE	TEMPERATURES.	AND	STANDARD	DEVIATION	IN	0168115	CELCIUS	600	CO		

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\*D--DIFFERENCE BLIMEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR HOUTES

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ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

		ENR	NUTE	TEM	PERA	7URES	AND	5744	O4RO	DEAL	4110	D4 10	N DEC	REES	CELS	IUS	FOR	GREA	CIR	CLE	AIR	ROUTE	S		
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-D--DIFFERENCE BETWEEN INDICATED PER CENT RELIGIBLITY TEMPERATURE AND INTERNATIONAL STANDARD STROSPHERE TEMPERSTURE.

ENROUTE	TEMPERATURES	ANO	STANDARD	MOITATION 30	1 N	2418010	CELSING	500	CREAT	CIRCLE AIR ROUTES	

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\*O--OIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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1

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

ENROUTE TEMPERATURES AND STONDORD DEVICTION IN DECREES CELSIOS FOR CREAT CLACLE

	Τ	ENKO	UTE	1 E M	PERAI	URES	ANO	516N	DORD	DF A1	6110	)N IN	DE G	REES	CELS	IUS	FOR	CRF A I	CIR	CLE	AIR (	ROUTES			
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THE BOEING COMPANY TRANSPORT DIVISION

	ENROUTE T	IEMPERATURES	AND STANDARD	DEVIATION IN DEGREES CELSIUS FOR GREAT CARCLE AND POLITICS
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			ENKU	UIE_	IEMP	ERAT	URES	AND	STAN	DARD	DEVI	ATIO	N IN	DEG	REES	CELS	ius	FUR	GREAT	CIN	CLE	AIR F	OUTES	•		
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PAROUTE TENPERATURES	AND	STANDARD	DEVIATION	IN DECREE						
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PAGE /A

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-/1/

ENROUTE	<b>TERPERATURES</b>	ANU S	DANDARD	UFVIATION	1 84	IN CREEK	( ) ) Clue	£ 110	COLAL	CINCLE	 

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CA1A0 53.000 40.000 50.000 20.000	-	14.5 14.5 14.5	-75 -54 -56 -8 7	-18 3 9 11 12	-17 10 14	-16 5 11 15	-74 -53 -52 -7	- 18 h 12 14 15	-16 - 6 13 15 15	- 15 7 14 16 15	-75 -51 -29 -4 12	-19 5 15 17	-17 7 17 18 18	-14 -8 17 19	-74 -53 -52 -7	12	14 16	-16 6 16 16	-75 -52 -52 -7	-19 - 12 15 14	-17 - 6 16 16	15 15 17 17	2 2 2	5 5 2 2 2	5 N.M1. 3 5 2 2 2 2 2 1 2 2
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CA1RO 55.00 40.00 30.00 20.00	0 -	56.5 56.5 84.5 21.2	-58 -57 -50 -26	-1 -6 -3	- <b>6</b>	-2 0	-55 -43 -21	-2 -0	5 0 5	1	- 6 9 - 3		10	12	-	5 7	5 -1 0 : 2		-54 -44 -19	0		5 6 8 7	5 4 5 5	3 5 8	72 NaM1.
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•0	OIF	EREN	CE BE	TWEE	N IN	OICA	7E0 P	EA C	ENT	RELI	ABIL	177 1	ENPE	RATU	RE A	NO I	NTERN	A110	THE B	. ANU!	C CO	PANY		NO.	06-71

	ENROUTE	1EMPERAT	URES AND	STANDARO	OEYIATI	ON IN DEC	REES	CELSIUS	FOR G	REAT CIR	CLE AIR R	OUTES	
HEIGHT IN ISA FEEL TEMP.		UARY 0/5 D85		RIL	J.	MPERATURE ULY	1	OCTOBER		AN	NUAL	STANDA	RO DEVIATION
CAIRO TO RUME 53.000 -56.40,000 -56.50,000 -44.5 20,000 -21.2	-60 -4 -56 I -48 -5	-1 0 4 5 -1 0 2 3 2 3	-54 -2 -57 -1 -44 0 -18 3	3 5	-65 -6 -48 8 -32 12 -8 14 9 15	10 11 14 15 15 16	-63	-6 -4 0 3 4 6 7 9	- 5	-62 -5 -54 2 -41 3 -15 4	7 9	JAN A	PR JUL OCT  1146 N.M1. 3 5 5 5 5 5 5 5 5 4 5 5 4 5 5
CAIRO TO SANT 55,000 -56.5 40,000 -56.5 30,000 -44.5 20,000 -21.2 10,000 - 4.6	-61 -5 -57 -0. -46 -2	-2 -1 5 5 1 2 4 5	-60 -5 -57 -1 -45 I -17 4 0 5	3 5	-64 -8 -51 6 -34 10 -8 13 9 14	1 1 9 12 14 15 15	-63 -56 -40 -13	-7 -5 0 3 5 7 6 10 8 10	-3 4 8 11	-62 -6 -55 1 -41 4 -14 7	-5 -1 4 6 7 9 10 11 10 12	b 5 3 b	2017 N.M1. 4
CAIRO 10 SHAN 55,000 -56.5 40,000 -56.5 50,000 -44.5 20,000 -21.2 10,000 - 4.6		1 3 3 5 -2 -1 0 2 0 2	-56 0 -57 -0 -66 -1 -20 1 -3 1	2 4 5 6 4 5	-58 -2 -50 7 -36 8 -11 11 5 10	9 11 11 12 15 14	-60 -56 -42 -16	-4 -2 0 3 3 5 5 6 5 8	-0	-58 -2 -55 2 -43 1 -17 4 -1 3	1 2 5 7 5 7 7 9	5	2216 N.MI.
CAIRO 10 SING 51,000 - 50.5 40,000 - 50.5 50,000 - 44.5 20,000 - 21.2 10,000 - 4.6	-75 -1v -55 2 -36 v -10 12 6 10	-17 -16 6 5 11 12 15 16 12 15	-74 -17 -52 4 -53 11 -8 15 9 15	-15 -14 6 H 13 14 15 16 15 16	-/6 -19 -50 / -28 1/ -2 18 15 1/	9 10 18 19	-76 -54 -35 -7	-20 -18 2 5 12 13 14 16 15 14	-17 6 14 16	-75 -19 -53 & -32 12 -7 14 9 16	-16 -15 6 8 15 16 16 17 15 16		445/ N.M1. 5 5 5 5 5 5 5 2 5 2 2 2 2 2 2
CAIRO 10 \$10C 55,000 -56.5 40,000 -56.5 30,000 -44.5 20,000 -21.2 10,000 - 4.6	-58 -1 -57 -1 -51 -6 -26 -5 -11 -6	2 5 2 4 -4 -2 -1 0 -5 -1	-56 I -55 I -47 -2 -21 -0 -5 -0	3 4 6 6 0 2 3 5 5 6	-50 0 -49 8 -30 8 -11 10	2 4 10 12 11 12 12 13 11 12	-54 -56 -63 -17	-5 -1 1 5 2 4 4 7 5 6	5 6 6	-57 -1 -54 2 -44 0 -19 2 -3 1	2 S 6 8 4 6 6 6 7 7	5	1055 N.H). 5 5 4 4 5 5 5 4 5 5 4
CAIRO IO 1ANA 53,000 -56.5 40,000 -56.5 30,000 -44.5 20,000 -21.2 10,000 -4.6	-70 -19 -55 5 -54 11 -7 14 8 15	-17 -16 5 6 12 13 15 16 14 15	-75 -19 -52 & -52 15 -7 15 9 14	-10 -15 0 / 14 15 10 10 15 15	-76 -17 -51 5 -30 16 -5 16 11 15	-16 -15 7 7 16 16 16 16 17 17	-76 -55 -52 -1	-19 -17 4 5 12 14 15 16 14 15		-75 -14 -52 4 -52 15 -6 15 9 14	-17 -15 6 7 14 15 16 17 15 16	2 2 2	5087 N.MI. 5 5 5 3 2 2 2 2 2 2 2 2 2 2 2
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\*()--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUSE TEMPERATURES OND STANDORD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE ATR BOUTES

		ENROU	1E T	EMPE	KATU	RES A	NO S	TAND	AD (	DE VIA	1104	111	DE GR	EES C	ELSI	US F	DR C	REST	CIRC	LEA	1R 80				
HE 1GH1							APR	E	WOU	E		ERAT	URE		OC TO	ALA	_		ANN	IIAI		STAND	ARO D	EVIATI	ON
FEET	TEMP.		JANU 050	DIS	D85	50	050		285	50	020	015	D65		C50		285	50	D50		085	JAN	APR .	JUL C	130
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20.000	-21.2	-17	3	,		-12	10	11	13	-2	19	2 I	51	- 10	11	13	15	-10	ii	15	i	•	3	ž	3
	A 10 OH	A																					209	M N.N	11.
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30,000	-50.5	-54 -5a	?	10	11	-53 -50	•	12	13	-48 -26	18	12	13 22	-55	11	14	15	- 33	11	15	17	5	•	3	3
	-21.2	-13	8	11	12	-9	12	15	17	-2	10	21 21	55	/	15	14	17	-	13	16	18	3	3	3	3
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20,000	-21.2	-6	16	17	18	-5	16	17	18	-5	17	17	14	-	14	17	17	-5	14	17	17	2	2	1	3
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20,000	-21.2	-57 -11	10	11	15	- 55	10 12	15	16	-2	19	20	21	-A	15	17	18	-7	14	17	18	5	5	2	1
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50.000	-44.5	-45	-0	2	5	-61	3	•	8	-28	14	19	20	- 5st - 12		11	10	- 58	8	11	15			5	3
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10,000	-44.5	-57		11	13	- 55		13	14	-26	18	20	21	- 52	12	15	IA	-55	12	15	17	5	5	3	5
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THE BDEING COMPANY NO. D6-7177 TRANSPORT DIVISION PAGE 83

ENROUTE 1	LAPERATURES	AND S	TANDARD	DEVIATION	1 N	DEGREES	CELSIUS	FOR	GREAT	CIRCLE AIR	ROUTES
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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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FERENCE METHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHENE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-7177 PAGE 85

	ENROUTE	TEMPCHATURES	AND	CHAMDARD	OF HEATERN	 0000400						
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•0--DIFFCRENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

PAGE 86

THE BDEING COMPANY TRANSPORT DIVISION

NO. D6-7177

FAMOUIE	15 HALFITY I DATE 2	AND STANDARD	DEVIATION IN	DEGREES CELSIUS	FOR CREAT CIRCLE AIR ROUTE	

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\*D--OIFFERENCE BETWEEN INDICATEO PER CENT RELIABILITY TEMPERATURE AND INTERNALIONAL STANDARD ATMOSPHERE TEMPERATURE.

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CAMUPANO 10 P 51.000 -56.5 50.000 -56.5 50.000 -44.5 29.000 -21.2 10.300 - 4.6		-20 -1V 6 5 12 13 16 17 16 15	-78 -21 -51 & -51 13 -5 16 9 14	15 15	-/5 - -55 -55 -/ 9	-17 -15 - 1 3 12 13 14 35	-16 13 16 15	-54 -51 -6	21 -10 - 5 4 15 14 16 57 14 55	18 15 17 16	-// - -54 -52 -6	20 - 18 3 5 12 16 15 16 16 55	5 15 17	3 5 2 2 2	45 N.A). 3 2 2 2 2 2 2 1 2 1
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CASABLANCA 10 51.000 -56.5 10.000 -56.5 20.000 -86.5 20.000 -21.2 10.000 - 4.6	-70 -16 -56 1 -61 6 -15 8	-11 -10 3 5 5 6 9 10 10 11	-69 -15 -55 2 -57 8 -11 10 5 10	v 10	-72 -52 -34 -7 12	-15 -15 - 4 5 15 12 14 15 16 16	-12 6 15 16	-5% -35 -8	15 -15 - 2 4 9 11 15 54 17 15	-12 -5 -12 -15 -16	-75 - -54 -57 -10 7	54 - 52 2 6 8 10 11 53 12 14	15	3 4 2 2 2	124P N.H1. 3 3 4 2 2 2 2 2 2 2
CASABLANCA 10 51.000 -56.5 40.090 -56.5 30.000 -84.5 20.000 -21.2 10.000 - 4.6	-50 -2 -50 -2 -64 -3 -22 -1	1 5 2 6 -1 0 2 6 2 6	-57 -1 -57 -1 -55 -1 -19 2 -2 2		-58 -53 -58 -13	-1 1 5 6 7 9 10 12 11 15	2 d 10 15	-61 -56 -62 -15	-k -2 0 5 1 6 6 9 5 8	-1 -1 7 10 -9	-50 -56 -65 -17 -0	-2 1 0 4 3 5		5 6 6 5 5	1221 N.H1. h 3 1 h 3 1 h 3 1
CASABLANCA 10 55.000 -50.5 80.000 -50.5 30.000 -80.5 20.000 -21.2 10.000 - 8.6	-67 -10 -55 2 -44 1	-8 -/ 6 0 1 6 / 8	-65 -8 -55 2 -39 5 -13 8	7 6	-70 -49 -50 -6 13	-16 -12 - 7 9 14 16 16 17 18 19	-11 10 17 18 20	-55 -57 -10	12 - 10 2 5 7 9 11 12 11 12	-9 4 10 15 11	-68 - -55 -58 -11	11 -9 3 6 7 10 10 12	12	3 3 5 5	2573 N.M1. 5 5 4 2 5 5 5 2 5 2
CASABLANCA 10 55.000 -56.5 40.000 -56.5 50.000 -46.5 20.000 -21.2 10.000 - 4.6	-76 -18 -56 5 -35 V	-16 -19 5 6 11 12 19 15	-/1 -1/ -52 & -55 12 -/ 16 8 15	15 16	-75 -52 -15 -6	-16 -16 - 6 6 ;2 13 15 16 16 15	-15 6 14 17 16	-5 5 - 5 5 - 7	17 -15 · 6 · 6 12 · 13 16 · 15 16 · 15	- 1 % 0 1 % 1 6	-5.5 -35 -7	17 -15 6 9 11 13 16 19 15 19	16	3 3 2 2 2	4125 N.H1 5 3 5 2 2 2 2 2 2 2 2 2
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CASABLANCA 10 51.000 - 56.5 60,000 - 56.5 50,000 - 81.2 10,000 - 8.6	-67 -15 -55 2 -62 3 -16 7	4 6 4 5 7 10	-56 3 -17 c -12 10	5 7 5 9 10 11 12	-72 -50 -51 -6 13	-16 -16 - 6 8 16 15 16 17 18 19	-13 8 16 18 20	-/1 - -56 -16 -9	-15 -13 -2 h -9 10 -12 13 -12 13	-12 5 11 16 14	-70 -53 -56 -10 7	3 9 6 11 11 1:	1 12	3 4 2 5 5	2425 NeR1 3 3 4 2 2 2 2 2 3 2
CASAHLANCA TO 51.000 -56.5 60.000 -56.5 50.000 -64.5 20.000 -21.6	-76 -17 -54 2 -37 7	-15 -14 4 <b>5</b>	-35 1	1 13 13	-53	-18 -16 4 5 12 14 16 17	-15 6 14 17	-76 - -53 -35 -7	-18 -16 6 5 11 13	-15 6 16	-55 -54	-17 -1 3 1 15 1 13 1	2 15	3 3 2	2626 M.R1 3 3 4 2 2 2 2 2

20,000 -71.2 -10 11 12 13 -8 13 14 15 -6 16 17 17 -7 14 15 16 -8 13 15 16 2 2 2 1 10,000 - 4.6 6 11 12 15 8 13 14 15 12 16 17 18 9 14 15 15 9 13 15 16 2 2 2 2 2 +0-OIFFENENCE BETWEEN INDICATEO PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE	TEMPERATURES AND	STANDARD	DEVIATION IN	DECREES	CELETUS	506	CREAT	 	

		_		ENR	DULE	TEMP	ERAI	URES	AND	STAR	OARD	DEV	IATI	ON 11	N 0E	REES	CEL	STUS	FOR	GREA	CIR	CLE	AIR I	ROUTES	i		
	HEIGH	11									ENRO				ATURE									7		DEAT	ATION
_	FEET	1	ISA IEMP.	50		UARY 075		51	AP 0 050	R I L	085	50	Ji	JLY	5 085	T	OC 1	08ER		50		NUAL	085	7	APR	JUL	007
	CASA8 53,00 40,00 10,00 20,00	0 0	CA 10 -50.5 -50.5 -44.5 -21.2		-5 -1	-2 2 1 5	0 6 2	-5	7 -1 5 1 5 5	3	5	- 6 5 - 52 - 36 - 9	1 - 1	7 -4	6 - 5 5 8 1 12 5 14	-6:	s - 1	7 -5 5 7	-3 4 8	-62 -56 -41	-5 1 3	-2	-1 5	5 5 5	5 5 5 5	321 1 3 3 3 5 2	
3	CASABI 51,000 10,000 50,000 10,000	0 -	A ID 50.5 50.5 44.5 21.2	LOND -54 -58 -47 -72 -5	ON -5 -2 -5 -1	0 2 -1 5	? 5	-57 -57 -45 -19	-1	2 1 2 5 5	5 5 6	-58 -53 -38 -11	10	7 9 12	10	-61 -56 -42 -15	- to	-2 5	-0 5 7 10 9	-59 -56 -43 -17	-201	1 4 5 7 8	3 6 6 9 9	5 6 4 5 5	_	120 N	
5	ASABL 51,000 50,000 70,000	) -	A 10 50.5 50.5 44.5 21.2	PAOR -61 -58 -46 -20 -2	-4 -1 -2 -2	-1 2 1 6 5	2 0	-59 -57 -66 -17	-5 -1 1 6	0 5 5	2 5 6 8 6	-67 -52 -36 -10	-6 8 12		11	-65 -56 -40 -13		-4 3 7 10 9	-3 4 8 11	-61 -56 -42 -15	-5 1 3	-2 4 6 9	0 5 H I1 12	5 6 3	5 5 5		3 h 3 3 3
5	ASAHL 1.000 0.000 0.000 0.000	-		HUN1( -54 -58 -48 -22 -5	-2 -1 -3 -1	1 2 -1 2	5 6 1	-51 -51 -45 -19 -2	-1 -1 -1 2 5	2 5 5 5	5 5 6 6	-59 -53 -17 -11	-2 4 10 12	0 0	11 11 11 15	-61 -56 -41 -15	0 5	-2 1 6 9 6	-1 6 7 10 9	-59 -56 -43 -17	-2 0 2 5	1 4 5 8	2 6 7 9	5 6 4 5 5	5 4 5	254 N	
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5 40 10 20	A SABL 5.000 0.000 0.000 0.000		A 1D	-/4 -/5 -17 -10 /	-1 a 2 8 11	-16 4 9 11 12	-14 -5 10 11	-/4 -54 -14 -6 /	-17 -2 -11 -15 -12	-15 5 12 14 15	-14 6 15 15	-75 -51 -35 -7 10	-16 3 11 15	-14 5 15 16	-13 5 11 16 16	-75 -51 -11 -7	-18 -3 -11 -14 -15	-16 5 13 15	- 15 5 14 16	-74 -54 -16 -8	-17 -3 -10 -13	-15 6 12 15 16	- 14 5 13 15	\$ \$ 2 2 2	2 2 2 2 2	3 2 2 2 2 2 2 2	MI. 3 2 2 2 2 2 2
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10	SAHL .000 .000 .000 .000	- 9	10 1	-50 -50 -51 -27 -5	- 1 -2 -1 -0	0 2 -0 5 5	2 4 1 4 5	-57 -57 -45 -19	-1 -1 -1 3	3 2 5 5	1 5 1 6 7	-59 -51 -17 -11 7	-2 4 7 10	0 6 9 12 15	2 H 10 15	-61 -56 -61 -15	-5 0 5 7	-2 1 6 9	-1 7 10 9	-50 -50 -45 -16	-3 0 2 5	5 8	2 0 7 9 10	5 6 4 5 5	10	29 N.	#1.
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• 0	01F	FER	ENCE	BETWE	EN 1	ND 1 C	I ATEO		CENT		- 1						-				1.8%		- 1		· · · · · · ·		,

\*O--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE	TEMPERATURES	ANG	CTANDARD	DEUTATION							
			31 A HO ARD	DEALWITH	IN	DEGREES	CELSIUS	FOR	CREAR	CIRCLE	

HE I GH	1 15				UARY		_		STAN	ENR			EMP	ERAT					- 04	URE		. I RC	LE A	A SER M		_	_		
FEET	TER	ρ.		050	075		,	0 05	PRIL 0 D75	Des	5 5	-	JUL	775		50	050	DIS	08		50 0	ANN		200	1000	DARD			
54.00 40.00 40.00 20.00 20.00	0 -56 U -44 D -21	.5	T0 -/5 -55 -57 -9	SAND -18 2 8 12	Y PO -17 4 3 14	10 10 14	-1-5	5		-15 11 15	-3	;	0	13 -	13	-76 -54 -35		-17	-10		15	17 .	16	-15 12 16	JAN 5 5 2 2 2	3 2 2 2 2 2 2 2 2	954 2 2 1	_	
CHICAC 51.DOC 40.0DO 3D.DOC 20.000 10.000	) -56 ) -56 ) -44 ) -21	.5	-57 -55 -52 -52 -17	-0 -8 -11	-5	7 - 1 - 1	-51 -51 -71	-	-2	12 -0 -0	-17	5	0 / 2	10	11200	-55 -53 -46 -73		5	10	-5	3 .		7	0 11 3	*	,	***		
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	-50.5 -50.5 -44.5 -21.2	-1	!	10	-6		-52 -52 -59 -27	***	-1 -2 -3	9 2 0 0 -	-49 -50 -42 -16	7 / 2 5			:	22	-1-1		10	-53 -52 -47 -24	- 1				:	,		-1:	
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EMMOUTE	TEMPERATURES	AND	STANDARO	DEVIATION	IN DECREES	CEL STUS	FOR	COCAT	CIRCLE	A10	BOUTE S

		T	UIE	( EMI	ERA	OKE 2		3184	DARU	DE V		- 11	DEC	REES	CEL	SIUS	FOR	GREAT	CIR	CLE	AIR I	ROUTE	\$		
HE SCHT	ISA	_	JAR	UARY	_	т-	AP	RIL	ENRO	UTE		PERA	TURE	_	AP 1	0858		, -	A.	MUAL		STOP	ID4 RD	DEVIA	T1 0
FEET	TEMP.			075	D85	50	050	075	085	50			D85	50			085	50			D05	JAN	APR	JUL	OCI
53,000 40,000	-56.5 -56.5	-69 -57	-12	-10		-67 -57		-8 2	-/	-69		-11	-10	-72		-15	-12	-69		-10	-8	3	3	448 N	.H1.
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	10 Pen-	-72 -54	-15	-15 5	-12	-70 -55	-13	-11	-10	-70 -54	-11		-11	-13			-14	-71		-12		5	30	25 N.	MI. 3
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THE BOEING COMPANY IRANSPORT OLVISION

NO. 06-/17/

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGRELS CELSIUS FOR GREAT CIRCLE ATR ROUTES

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+D--DIFFERENCE HERHEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE	1EMPERATURES	ANO	SSANDARD	OE VIASION	11	DEGREES	CELSIUS	FOR	GREAT	C10C15	 

HE 1GH		<u> </u>	KOUT	E 16*	PERS	I UKE S	ANG	236					7111		CEL	STUS	FOR	GRE	7 61	ACLI	AIR	ROUTE	<u> </u>		
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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY SEMPERASURE AND INTERNASIONAL STANDARD OTNOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT OIVISION

NO. 06-7177

		ENRU	ult	TE MP	LKAT	UNES	ANU	STAN	DARU	De 41	AT 10	N IN	DE CI	lets	LELS	IUS I	GR (	GREAT	CIR	CLE		OUTES			
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. O--DIFFERENCE BEINEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

LAROUTE TEMPERATORES AF	NO STANDARO	DEVIATION IN DEGREES	CELSIDS FOR GREAT	CIRCLE ALR PARIES
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		-	LN	ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIDS FOR GREAT CIRCLE AIR RODIES  ENROUTE TEMPERATURE  STANDARD DEVIATION OF DEGREES CELSIDS FOR GREAT CIRCLE AIR RODIES  STANDARD DEVIATION OF DEGREES CELSIDS FOR GREAT CIRCLE AIR RODIES																						
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THE BOEING COMPANY TRANSPORT DIVISION

ND. 06-7177

EMPOUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

			ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES																								
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THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

EMBOUIE TEMPERASU	RES SNO	SSONDORD	DE VI 65 10N	IN DEGREES	CELSIUS	EOD GREAT	CIRCLE AIR ROUTES

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ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CEISTUS FOR GREAT CINCLE ATR HOLLES

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THE BOEING COMPANY
TRANSPORT 0191510N

NO. 06-7177

ENROUTE TEMPERATURES ONO STONDARD DEVIOTION IN DEGREES CELSTUS FOR GREAT CINCLE OIR MOUTES

	ENROUTE	11 MPERA	URES	ANO S						LES	CEES	lus f	OR (	REGI	CINC	EE (	bin n	$\overline{}$	· · · · · · · · · · · · · · · · · · ·	
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10.000 -44.5	-35 10 -V 15	11 12	- 11	15	14 15	-11	12	15	15	- 5 1	1.5	10	15	- 5 5	12	1 5	14	2	2 2 2	
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\*\*U--DIFFEMENCE BETWEEN INDICATED PEN CENT RELIABILITY TEMPENATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR HOUTES

		ENRO	UIE	TEMP	EHAI	URES	ANU	STAN	UARU	DEVI	MIL	ON IN	OEG	RELS	CELS	sius	FOR	GREA	1 (1	RCLE	AIR	KOUTE:	<b>i</b>	
HEIGHT			140						LNRO	ule		PERA	TURL									STAN	OARD GEVI	ATTON
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	10 JUHAA -56.5 -56.5 -44.5 -21.2 - 4.6	-11 -11 -13 -12 -6		-18 5 14 16		-7: -5: -6	6 - 1v	-17 7 14 16 15	-16 8 15	-77 -55 -55 -7	- 16 4 11	- 14 5 13	-15 6 15	-74 -52 -52 -6	- 16	- 10	5 - 15 5 7 1 15 5 16		-11	3 - 10 1 10 1 10	5 - 1 6 5 7 6 15 5 16	3 3 2 1 2	3624 5 5 2 2 2 2 2 2 2	
51.000 40.000 50.000 20.000 10.000	10 KANO -50.5 -50.5 -40.5 -21.2 - 6.6	-76 -56 -56 -7 8	-20 5 9 12	-1d 5 10 15	-17 6 11 15	-76 -52 -32 -10	15	-17 7 14 15	-16 P 15 16 16	-76 -54 -52 -5 12	12 16	1	-17 14 17 18	-77 -52 -32 -6	13		15 17	-76 -55 -35 -10	12	15	14	5 5 7	1525 3 3 5 2 2 2 2 1 2 1	M.M1. 3 2 2 1
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10.000 10.000 10.000	-50.5 -50.5 -44.5 -21.2 - 4.6	-55 -59 -12 5	10	-14 7 11	-15 5 8 11 12	-/2 -55 -15 -10	4	-15 11 15 12	-12 6 11 15 15	-75 -55 -56 -7	-17 6 11 16	-15 5 12 16 17	-14 5 15 16 17	-74 -55 -54 -7 B	-18 5 10 14	-16 5 12 15		-75 -54 -55 -9	- 16 2 9 12	-16 11 16	-13 5 12 15	3 2 2 2 2	801 d \$ \$ \$ 2 2 2 2 2 2 2	1.#1. 3 2 2 2
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•DD1FF	ERENCE B	ETHE	N I	NOIC	ATEO	PER	CENT	REF	LAKI	110	T F MD	FRAT	IDE											

\*D--OIFFEHENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHENE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-717

ENROUTE SEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAS CIRCLE AIR ROUTES

	EMROUT	E SEM	PERAT	URES	LNO :						_	REES	CELS	IUS	FOR (	GREGS	CIRC	CLE	AIR R	T	
HEIGHT ISA	J.	ANUAR	,	7	API	HL	MROL	TE	JU	PERAT	TURE	_	OCT	OBER		_	AW	WAL		STAN	DARO DEVIATION
FEET TEMP.	50-0	50 019	D85	50	050	075	085	50		075	D85	50	050	075	D85	50	050	075	085	JAN	APR JUL OCT
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30,000 -44.5 20,000 -21.2	-41	3 9		- 30	5	10	11	-35	10	11	12	-34	12	11	12	-38	10	12	10	5	3 2 3
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DAKAR TO PORT			•	1	•							12		• • •	••	ľ	•	•••			4.
55,000 -56.5	-11 -2	1 -19		-77			-18	-74		- 16	-15	-17	-21	-19	-18	-11	-20	-16		3	2576 N.MI.
40,000 -54.5 30,000 -44.5	-50	0 11		-50	13	13	1	-33	11	12	13	-53 -32	13	14	15	-54	12	13	36	3 2	3 2 2
20,000 -21.2	-8	3 14	15	-1	14	16	16	-7	15	15	16		14	16	17	-7	14	14	16	2	2 1 1
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DAKAR 10 ROME																					2250 N.MI.
55.000 -56.5	-66 -1		-•	-65	-9	-7	-5	-69		-10	-9	-60	-12	-10	-9	-67	-11	-8	-1	•	3 3 3
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20.000 -21.2		5 7	•	-13		10	10	-0	13	15	10	-10	11	12	15	-12	10	11	13	3	3 2 2
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55.JOO -56.5		9 -17	-14	-10	-19	-17	-17	-75	-17	- 15	-15	-76	-20	-14	-17	-75	-19	- 17	-16		2791 N.MI. 3 2 3
40.000 -54.5	-54	2 4	. 5	-55	2	•	5	-55	2	5		-55	3	•	5	-54	2	•	•	3	3 2 2
20,000 -21.2	-9 1	9 10 2 15	11	-5%	11	12	12	- 50 -7	11	12	15	- 32	12	13	17	-54	1.	12	13	2	2 2 2
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	11V-J6F	FA																			3055 N.MI.
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20.000 -21.2		, .		-12	10	11	12	-5	10	17	20	-,	12	1 5	13	-10	11	15	13	2	2 2 2
DARGE TO VIENNE				1		•	•	'•	. •								•			•	
55,000 -56.5	-64 -	e -s	-	-6.5	-7	-5	-5	-66	-9	-7	-•	-67	-10	-8	-1	-65	-8	-6	-		2615 N.MI.
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50.000 -44.5 20.000 -21.2			12	-38 -10	11	13		- 52	12	13	15	- 55	10	12	12	-34	12	10	11	2	2 1 2
10,000 - 4.4		ii	12		13	15	16	10	15	1.	16	-	15	15	-ii	-	13	;;	13	3	3 1 2
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53,000 -54.5				-68		-	-	-11			-12	-74 -55	-17				-14		-10	3	5 2 3
10,000 -44.5	-41	. 5		-40	5	•	3,	- 32	12	14	10	- 34	•	11	12	-56	ļ	10	31	2	3 2 3
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53.000 -54.5	-65 -		-2	-61	-	-1	•	-65	-6	-6		-00	-•	-7	-5	-65	-7	-	-2	•	1036 N.MI.
40.000 -54.5 50.000 -44.5	-57 -		5	-50	-1	2		-54 -35	10	32		-55	1	7	5	-56	3	5	8	5	5 5 5
20,000 -25.2 18,000 - 4.4	-21 -			-17	•	7	ì		15	35	15		•	51	42	- 45			51	5	2 4
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ENROUIE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

-		1	-	ENRO	UIE	IEMP	ERAI	URES	ANO	STAN	DAKD	DE VI	A110	N IN	DEG	REES	CELS	IUS	FOR	GREAT	CIR	CLE	AIR R	OUTES			
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\*D--DIFFERENCE BETHEEN INDICATED PER CENI RELIABILITY TEMPERATURE AND INTERNATIONAL SIANDARD ATMOSPHERE TEMPERATURE.

PAGE 104

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

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+D--DIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BDEING COMPANY TRANSPORT DIVISION

ND. 06-/177

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\*D--DIFFERENCE BETWEEN INDICATED PER CENI RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

PAGE 110

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

EMPOUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSTUS FOR GREAT C	CIRCLE AIR	ROUTES
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30.000			-54 -61	2	5	6	-54	2	7	7	-47			15	-55	2	•	- 5	-52		7	9			5	5
20.000	0 -	-21.2	-17	5	7		-13	8	10	11	- 5	18	20	21	-10	11	10	-	-36 -11	10	12	16	5	5	3	3
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•D--DIFFERENCE BETWEEN INDICATED PER CENT RELIGBILITY TEMPERATURE AND INTERNATIONAL SIANDARD ATMOSPHERE TEMPERATURE.

ENROUTT	1EMPERATURES	AND STANDARD	DEVIATION IN	DECREES CALSTIN	FOR GREAT CIRCLE AIR BOURES

		1						3144	17440	Df A I	**10		020		CELS	103	FUR	OKETI	CIR	CLE	AIR P	OUTES			
HE 16H1 14 FEE 1	ISA ICMP.	50		JARY 0/5	DBS	50		R1L 0/5	OH5		JU	LY	7URE 085	50		OBER	085	50		NUAL 015	085	STAN		JUL 0	ON CT
\$1,000 \$0,000 \$0,000 20,000	-44.5		-16 0 5	-14 1 7 11	7	-70 -57 -59 -10	-0	13	5 N 15	-72 -55 -32 -6 11		13 16	16	-75 -55 -35 -8	10	11 15	12		-16 1 8 17		-12 6 11	3 6 2 3 5	3 5 2 5 5 5	840 M.H 2 2 2	_
51.000 40.000 16.000 20.000 10.000	10 JOH -50.5 -50.5 -44.5 -21.2 - 4.6	-76 -52 -50 -5	-19 4 16 10 15		-16 / 16 18 16	-75 -52 -52 -6 9	- 19 5 13 15	-16 7 15 16 15	15	-70 -52 -23 -7	5	-12 6 15 16 17		-13 -52 -32 -1	12	-16 6 16 16	15 16	-74 -52 -32 -6	-17 5 13 15	-14 6 14 16	15	5 2 1 2	3 2 2 2 2	590 N.MI 3 3 2 2 2 2	3 3 2 2 2 2
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1 1 1 6 6 t 5 1, 300 40,000 50,900 20,000 10,000	-50.5		2 5	6 10	-11 5 7 11 11	-70 -54 -16 -10	-15 5 11	-11 5 10 15	-16 7 11 15	-12 -51 -51 -6 11	- 16 6 14 16 15	-16 7 15 17	-15 8 16 18	-72 -54 -55 -9	-15 3 10 12 12	-15 6 11 16 15	-12 5 12 14	-11 -53 -35 -9	-14 3 9 12 12	-12 5 12 14	-11 13 15 15	3 3 2 5 5	3	2 2	2 2 2 2 2 2
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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

						ALG	ROUTES
	 	251 5 1116	e na	CEFAI	LINCLE		

200 M.H
222 M.H.
222 M.H
222 N.H
222 M.H
222 N. F
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#30 W.#
#30 W.#
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1000 4.7
1000 4.7
1004
1004 N.F
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3284 N.
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264 8
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\*D--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

	EMRO	OIE	TE m	PERAI	URES	ANO	STAR	OSRD	DEVI	ATIC	N 11	4 DE 0	REES	CEL	5105	FOR	GREA	T C11	ICLE	AIR	ROUTES			
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1459KFURT 10 51.000 -56.5 60.000 -56.5 10.000 -66.5 20.000 -21.2 10.000 - 6.6			- 4 - 4	->	- 5		-1		- 48 - 50 - 61 - 14		7	11	-54	-0	2		-55	-2	3		5	5 6 5	1091 5 4 3	5
F48NKFUH1 10 1 53,000 -56.5 40,000 -56.5 50,000 -44.5 20,000 -21.2 10,000 - 4.6	-56 -58 -51 -27 -11	-2 -6 -6		-2 0 -1	-54 -56 -46 -27	- 5 - 1	-1	6 6 1 5 5 5	-51 -52 -60 -15	5 5 6 7	10	10 8 11	-58 -56 -43 -18 -2	-2 0 1 3		2 5 8	-55 -56 -46 -20	-1	5 5 5	**	5 5 6		168 3 5 8 3	N.H1.
F4 NASPUNT 10 A 34.000 -36.5 40.000 -36.5 50.000 -46.5 23.000 -21.2 10.000 - 4.6	-68 -55 -41 -15	-12 2 3 7	-10	-8 5 10 V	-67 -56 -18 -12	7	-V 5 9 11	-A 10 12 12	-69 -51 -52 -7 10	-15 6 15 15	- 11 H 14 16	-10 9 15 17	-70 -54 -56 -10	-13 2 0 11	-11 4 10 15 12	-10 5 11 55 15	-69 -53 -57 -11	-12 5 8 50 10	-10 5 10 55	-0 7 12 14 15	3 3 3 3	3 5 5 5	400 i	4.M1. 5 5 5 2
FRANCEURI 10 N 53.000 -50.5 43.000 -60.5 10.000 -40.5 20.000 -21.2 10.000 - 6.6	-57 -55 -49 -27 -15	-0 1 -5 -6	6 -2 -1	-0	-50 -50 -67 -20 -8	-5 -7 -5	-0 1 -0	9 1 5 2	-57 -52 -40 -14	5	7 8 7 10 8	8 10 8 11	-57 -56 -66 -19	-0 2 1 2	3 6	***	-55 -56 -65 -21	2 5 -1 0 -1	5 7 5 4 2	,		3	540	1.H1. 5 6 5
Frehatfurl 10 C 51.000 -50.5 40.000 -50.5 50.000 -44.5 20.000 -21.2 10.000 - 4.6	5L0 -57 -5V -52 -2V -13	-1 -2 -1 -8	-5 -5	-5 -2	-55 -56 -69 -26 -8	-9 -9 -9	-2 0 -C	# 9 -0 2	-68 -50 -62 -15 0	8 7 5 6 5	10 10 5 8	12 12 7 9	-57 -56 -45 -20 -5	-0 0 -1 1	2 5 5		-56 -55 -67 -27 -7	3 -2 -1 -2	9 1 5 2	3 5	5		500 N	1.H [ .
FRANKFUEL 10 P. 51.000 -50.5 50.000 -54.5 20.000 -21.2 10.000 - 4.6	-57 -58 -50 -26 -10	-6 -2 -6 -5	- 5 - 1 - 2	-2 1 0	-54 -54 -48 -77 -6	0 -5 -1	-0	1 4 5	-51 -52 -60 -16	5 5 6 7	8 7 7 10 0	9 10 8 11	-58 -56 -66 -18 -2	-2 0 1 5 5	5 6 7	5 6 7	-55 -56 -45 -20		5 5 5	67676	•		5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	.#1. 5
FRANKFURT 10 PF 51,000 -50.5 50.000 -50.5 50.000 -40.5 26,000 -21.2 10.000 - 4.5	-56 -58 -51 -27 -12	-? -1 -6 -1	2 -6 -2 -5	-2 -0 -1	-54 -56 -48 -21 -7	5 -6 -1 -7	5 -1 2	7 6 0 5 5 5	-50 -51 -60 -16		8 . 7	10 10 8 11	-58 -56 -46 -14 -5	-1 0 1 5	3 5 6 5	5 5 6 7	-55 -56 -66 -20 -5	2 1 -1 1	5 5 2 6 5	77 6 6 6	5		20 N	.#1. 5
		0		-11 5 9 12	-/0 -55 -10 -13	-1% - 2 6   11   10	-11 - 5 10 12		-68 - -53 -34 -8	10	-10 5 12 16	-8 6 15 15	-71 -50 -35 -4	-14 2 10 12	-12 ·	-11 -5 12 15	-70 -54 -36 -10	-13 ·	-11 - 51 13	-50 5 12 16	•	5 5 2	65 N.	.#1. 3 3
10.000 -56.5	-56 -56 -50 -26	-5	- 5 - 1	6 -1 1	-55 -57 -67 -21 -5	-1 -5 0 -0	5 0 5 2	5	-54 -52 -30 -12		5 7 8 11	6 9 0 12 12	-50 -56 -65 -17	-2	0	- 4 6 9 4	-56 -56 -45 -17	1 -0 -2	3 4 3	5	5	2 5	2 22 N.	.#1.
\$0.000 -56.5 \$0.000 -66.5	-58 -50	-1 0 -7	5 -6 -7	5 -5 -5 -1	-51 -52 -47 -28 -15	0 -5 -7	-2 -5	4	-69 -69 -63 -17	8 7 7 6 5	10	11 12 5 8	-55 -55 -67 -26	-5	0 1 -0	3	-53 -53 -46 -25		-0 0	8 10 2 2	•	•	36 N.	#1.
10,000	-54 -54 -44 -22	-2	1 2	1	-56 -58 -45 -20	0 -1 -1 -1 -2	5 5 2	3	-56 -53 -58 -12	0 5	3	10	-60 -57 -42 -15	-0 5	-1 5 6 7	0 5	-54 -50 -65 -17	-101	20077	5		144	5 N.	
20.000 -21.2	-57 -58 -50 -76	-5 -	\$ \$ - \$ - 1	-}	-54 -55 -67 -75	\$ 1 -\$ -1	5 -0 2	1	-50 -51 -61 -16		6	11	-58 -56 -44 -18	-1 0 0 5	2 4 5	5	-55 -55 -46 -20	2 1 -1	5 6 2 6 8	78000	5		3 2 N.	M1.
40.000 -56.5 50.000 -44.5 20.000 -21.2	-57 -59 -52 -20	-0 -2 -8 -	•	-5	-55 -56 -67 -26 -8	- 5	6 6 -7 0	-1	-4# -50 -41 -15	8 6 5	10	12	-57 -56 -45 -20	-0 0 -1 1	2 6 2 5 2		-54 -55 -67 -22	3 -2 -1 -2	6 6 1 3 1	8 9 5 5 5 5	5 5 4 6 6		0 N.	
50,000 -44.5 20,000 -21.2	-57 -57 -51 -26	-6 -	- 5	-7 0 -1	-55 -55 -86 -20 -8	-2 -1 1	•	6 .	5	11 10	11 15 17	13	-56 -43 -17 -1	- ? 0 ? 5	0 5 4 7 7		-51 -54 -44 -18 -2	-0 ? ! \$	2 6 5 7 6	8 7 0 8	h 5 h 5 5 5	-	5 N.1	

\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE SMD INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

ND. 06-7177

ENRUUTE /EMPERATURES AN	O STANDARO	DEVIATION IN	DEGREES	CELSTUS I	FOR GREAT	CIRCLE AIR	PAULTES

-		ENRU	UTE	1EMP	ERO TI	JRES	4NO	STAN	DARO	DEVI	<b>6710</b>	1 1N	DE GI	EES	CELS	7US	FOR	GREAT	CIR	CLE	41R R	OUTES		
HEIGHT	ISA	-	IAN	UARY		,	401	RIL	ENROL	TE	/ EMI		TURE	1	OC 1	DAER			A Mai	WUOL		STON	0040 D	EV141704
FEET	TEMP.	50	-050			50	050		085	50	050		085	50		175		50			085	JAN	AFR .	JUL OCT
FR SMKFU		EL &			,	-56	0	2		-50	- 5	-0	,	-61	-4	-2	-0	-58	-2		2		3 15	95 N.MI.
43.000	-50.5	-57 -50	-0 -3	- 1	-1	-57	-0 -1	3	3	-49	8	10	11	-56	0	3		-55	2	5	7	5	3	
20,000	-21.2	-25	- 3	-0	1	-20	i		5	- 10	11	13	15	- 16	3	8	•	-18	1	7	*			3 3
10,000	- 4.6	- 0	- •	- 1	0	-	1	•	6		10	12	11	1	5		•	-5	3	•	•	•	1	, ,
51,000	47 10 1 -50.5	-55	2	5	,	-50	6		10	-48		11	15	-55	5	6	,	-51	5	8	10		509	N.MI.
50,000	-50.5	-57	-10	- 1	-6	-51	-	10 -1	12	- 57	7	12	14	-52	-2	7	9	-52	-2	9	11	1	5	5 5
	-21.2	- 54	-1.1	-9	-10	-27	-6	-2	-2	-13		11	13	-25	-2	-1	-	-24	-3	2	2	1		
FRENKFU				••					•	•	•	Ň		-			•	-10	-	-,	•	•		
11.000	-56.5	-58	-1	2	5	-57	-0	2	•	-50	-2	0	1	-61	-	-2	- 1	-50	-2		2	5	,	3 3
10.000	-56.5	-57	- 6	-2	-0	-97	-1	3	1	-51	î	10	11	-56	5	3	;	-55	1	5	,		3	3
10,000	-21.2	-24	- 5 -2	i	5	-14	2	5	6	-11	11	12	14	-15	5	8		-17		1	•	3		3 3
FRANKFU		11 550																					3.5	5 N.M1.
55.000	-50.5	-50	-2	2		-54	5	5	6	-51 -51	5	8	10	-58	-1	1	2	-55	2	5	7	5	5	5
20.000	-44.5	-51 -27	-1		-2	-48	-1	-1	1	-10		10	11	-18	1 5		5	-46	-1	2			1	3 5
10.096	- 4.6	-12	-1	-1	-1	-6	-2	i	5	2	1		10	-2	2	5	7	-5	0	•	•			5 5
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40,000	-56.5	-58	-2	- 5	-1	-57	-1	-1	1	-53	-/	-5	-3	-56	-7	-3	-	-56	-0	- 5	-1	5	5.	3 3
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\*D--OIFFERENCE BETWEEN INDICATED PER CENT RELIGIBILITY TEMPERATURE OND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

		ENROUT	E TEM	PERAI	URES	ANO	STAN	OHAD	0E v 1	AT10	N 1N	0EG	REES	CELS	lus	FOR	GREAT	CIR	CLE	ele e	OUTES			
HE I GHT	154		ANUAR		1	40	RIL	E NHOL	TE	TEM	PERA	TURE		of T	OBER	_	c -	ANI	MUST		STON	DARD	DEV	4710N
FEEL	IEMP.		50 07		50	050		085	50	050		085	50	050			50	050		085	JON	4PR	JUL	. 007
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.0--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD STMOSPHERE TEMPERATURE.

PAGE 116

THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-7177

E MARIANA		AMILE TAMESAUT	DEVIATION	IN DEGREES CELSIUS	EAR COLAS CARCES	ALD BALLTE
CHADAIC	ICHPERATURES	AND STANDARD	DETIMITUR	IN DECREES CEESION	PUR GREAT CIRCLE	AIR RUUIES

	ENAD	VIE	15 MP	ERATI	MES	ANU				<del>-</del>			EES	CELS	105 1	FOR (	REA1	CIRC	CLE	A)R R	OUTES	
HEIGHI IN ISA	77		JARY		1	API	RIL	MROL		JUL			1	OCT	OHER		T		HUAL		100	ARO DEVIATION
FLET TEMP.	50	050	0/5	085	50	050	0/5	045	50	D50	015	065	50	050	0/5	085	50	050	075	085	JAN	APR JUL OCT
SEMEVA 10 1517	-50	0		5	-55	1	•	5	-55		4	5	-59	-5	-0	1	-56	0	3		5	1057 N.M1.
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20.000 -21.2 10.000 - 4.6	-26 -10	-5	-1	-0	-51	-0	5		-12	10	12	13	-16 -1		6	8	-19 -3	2	5	8	5	; ; ;
GENEVA 10 NANO		, U									27	122										2055 N.H1.
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50.000 -ww.5 20.000 -21.2	-45	1	5	8	-14	5	1	10	-35	11	15	16	- 57	10	12	10	-18		11	10	5	5 5 5
10,000 - 4.6	0	5	-	8	•	8	10	11	11	16	10	10	5	10	11	12	5	10	13	14	3	5 2 2
G14644 10 A1FL	AVIK	-1		5	-52		,	•	-50	8	10	12	-56				-5E		_	_		1427 N.H1.
55.000 -56.5	-51	-1	5		-55	5		10	-50	-	11	15	-55	1	5	,	-54	5	7	10	5	1 5 6
20,000 -44.5	-51 -27	-6	-2	-5	-46 -25	- 5 - 5	- G	2	-10	3	7		-26	-1	2	•	-22	-2 -1	3	5		; ; ;
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51,000 ->6.5	10U#	- 8	-6	-5	-64	-1	-5	-4	-67	- 11	-9	- 8	-67	-11	-9	-1	-00	-9	-1	-5		2265 N.M1.
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20.000 -21.2	-15	6	10	10	-11	10	12	15	11	15	16	17	-9	12	15	14	-10	11	15	14	5	2 2 2
G1 NL VA 10 1158	C+																					807 N.#1.
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10,0005		-5	-1	1	-46	- 1	1	5	- 16	7	٧	10	-42	5	5	7	-45	1	5			6 5 6
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G1 11 4 10 1640	GN.																					406 M.M1.
55.000 -54.5	-57 -50	-1 -2	2	5	-54	2	3	7	-52	5	8	10	-58	-2	3	3	-55	1	5	7	5	
10.000 -44.5	-50	-5	-1	-1	-47	-5	-0	1	-10	5	10	11	-17	1	*	5	-05	-1	5	;	5	3 3 3
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SENE VA 10 105	-57	15			-55	1	6	6			,		-44	0			-50					5131 N.#1.
+0.000 -56.5	-55	i		15	-55	•	4	10	-51 -51	•	•	11	-56	3	3,		-5 5	3	,		6	6 5 5
3D.000 -44.5 20.000 -21.2	-52 -50	-1 -V	-5	- 5 - 5	-24	-	-1 -1	0	-15	5	•	10	-21	-0	3	5	-47	-2	2	5		, , ,
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51-000 -56.5	10 -5e	-1	2		-50	0	5	5	-51	-0	2		-60		-1	0	-58	-1	2		5	545 N.MI.
10.000 -56.5	- 50	-2	-1	0	-54	-7	2	5	-55	5		10	-56	5	5	,	-57	-0	5	5		: : :
20.000 -21.2	-25	-2	i	1	-20	1		5	-11	10	12	15	-16	6		9	-17		1	*	5	4 5 4
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50.000 -56.5	-5H	-2 -5	-5	-1	-58	-1 -2	2	2	-55	5	6	9	-56	9	5		-56	-0	5	5		
20.000 -21.2	-26	-6	- 1	- 1	-21	-0	5		-12	9	11	12	-17	5	1	P	-14	2	5	8	1	: : :
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GENEVA 10 MUSC																						1501 N.MI.
\$3.000 -56.5 40.000 -56.5	-56	-2	1	5	-55	3	5	',	-49	6	10	10	-51	-0	2	5	-55	5	5	1	3	5 5 5
	-52	-B	-5 -5	-5 -1	-4H		-1	1 5	- 10	,	1	8	-44	0	5	;	-46 -21	->	2	6		; ; ;
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51NEV4 10 MUN1		0		,	-55	,			-55			,	-59	-2	0	2	-50	. 1			,	255 N.MI.
40.000 -56.5	-58	-7	2		-57	- 1	5	5	-55		,	9	-56	Ö	5	5	-56	0				6 5 4
20,000 -21.2	-50	-5	- 5	-2	-21	-0	-0		- 59	8	11	12	-17	1	,	0	-19	-0	5	,	1	
	-10	-5	-1	1	-5	-1	7	5	5	8	10	11	->	5	6	н	-3	1	5	,	,	
SENEVA TO MAIN	-69			-9		-12		-4		- 14				-15			-10				5	5785 N.M1.
10,000 -44.5	-55 -40	2		7	-54	3	5	10	-51	15	15	15	-54	9	11	12	-55	5	11	12	3	2 2 3
20.000 -21.7 10.000 - 4.6	-14	4	10	10	-11	10	17	13	-6 10	15	16	17	-9	12	15	14	-10	11	15	14	3	5 2 2

\*U--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION	IN DEGREES	S CELSIUS FOR GREAT CIRCLE AIR HOUTES
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	1	ENRO	UTE	TEMP	ERAT	URES	ANO							REES	CELS	IUS	FOR	GREAT	CIR	CLE	AIR H	OUTES			
HI IGHT IN FEET	ISA TEMP.	50		UARY 075		50	API 050	RIL	OFS	T	JU	PERA LY 075		50	0C T	DIS		50	050	NUAL 075		1	DARO APR	JUL JUL	OCT
GENEVA 51.000 40.000 30.000 20.000	-56.5 -44.5 -21.2		-15 2 5 8	10	-10 5 7	-69 -54 -36 -11	-15 5 8 11	-11 5 10 12	-9 7 11 15	-71 -51 -52 -6	-14 5 15 15	-12 7 16 16	-11 8 15 17	-71 -54 -35 -9	-15 5 10 12 12	-15 4 11 15 13	-12 5 12 14	-70 -55 -56 -10	-14 3 9 12	-11 5 11 14	-10 6 13 15	3 3 2 5 5 3	3 3 4 2 2 2 2	494 N. 3 2 2 2	HI. 3 2 2 2 2
GENEVA 51.000 40.000 50.000 20.000 10.000	-50.5 -50.5 -44.5 -21.2	YORK -57 -50 -48 -25 -11	- 1 - 4 - 4 - 6	-1 0 -2	0 2 0	-55 -55 -67 -22 -7	2 1 -2 -1	5 6 0 2	2	-54 -53 -40 -15	5 8 7	5 7 8 11 9	7 9 9 12 10	-58 -55 -45 -18 -3	-1 2 1 4	2 5 4 7 5	5 7 6 9 7	-56 -55 -44 -20 -5	1 2 0 2 -0	6 6 5	5 8 6 7 5		3 6 6 5 5 5	346 N.	H1.
54.000 40.000 50.000 20.000 86.000	-76.7 -64.5 -21.2	-57 -59 -51 -28 -12	-1 -2 -1 -1	3 -4 -5	-1 -1	-51 -55 -4d -25 -7	-2 -5	6 -1 1 0	2 0 2 2	-49 -51 -41 -15	7 6 1 6 5	9	11 11 7 10	-57 -56 -45 -19	-1 0 -0 2	3 5	5 6 6 7 5	-54 -55 -46 -21	2 1 -2 -0 -1	5 6 2 6 5	7 8 4 5	5	6 6 5 5	856 N. 5 5 4 5	MI.
GENEVA >1,000 40,000 10,000 20,000			-0 -7 -5 -4	-5 -1 -1	5 4 -1 1	-55 -57 -67 -21 -5	-1 -3 -0	5 0 5 2	6	-55 -51 -60 -11		6 7 7 10 10	7 9 12 11	-59 -56 -65 -17 -1	-2 0 5	0 5	, 6 9 8	-56 -56 -45 -19 -3	0 -0 2	5 5 5	5 6 5 7 7	5	****	221 N.	*1.
GINEVA 55.006 60.000 10.000 20.000		-56 -58 -51 -27 -11	0 -2 -6 -5	2 -5 -2 -2	-2 0 -0	-54 -51 -48 -22 -6	-0 -5 -5	-0 2 2	6	-52 -52 -40 -11 -5	5 8 7	1 10 0	8 9 0 11	-58 -56 -65 -17 -2	-2 0 1	1 5 6	2 5 5 6 7	-55 -56 -65 -20	-1	5	5 1 6	5	****	01 Nat	*1.
G: St VA 5 1,000 %0.000 40.000 20.900 10.000	10 ×10 -56.5 -56.5 -56.5 -84.5 -21.2				-11 5 9 13 12	-71 -54 -15 -10 6	-14 2 4 11	-12 5 11 11 12	-11 6 12 14 15	-69 -51 -14 -8	-15 6 11 15	- 11 - 5 - 12 - 15 - 15	-9 6 13 15 15	-75 -54 -15 -6 7	-15 5 10 15	-11 -4 -52 -14 -11	-12 5 13 15	-/1 -56 -55 -4 /	-14 2 9 12 11	-12 - 4 11 14	-11 5 12 16	2 5 2	5 4 2 2 2	5 Nel 5 2 2 2 2 2	*1. 5 5 5 2 2
Gr NE VA 55.000 10.000 20.900 10.000	-50.5 -50.5 -44.5 -21.2	-56 -58 -49 -25 -8	0 -1 -5 -4	-2 -2 -1 0	5 -1 1 2	-56 -58 -67 -20	-1 -2 -2 0	1 1 5 5	5 N 2 5 5	-56 -52 -16 -12	1 6 10 9	1 / 4   12   12   12	5 8 10 15	-60 -55 -42 -16 -1	- 5 0 2 5	-1 1 5 H	1 6 9 9	-57 -56 -66 -18	-0 0 0 5	2 4 6 6	6 6 8	5 5 5	*****	5 5 5 5 5	11.
GENE VA 51.300 40.000 13.300 23.000 17.000	-56.5	-57 -56 -51 -52 -17	-1 -8 -10	5 -5 -6 -8	5 7 -4 -6	-52 -52 -69 -27 -12	5 -6 -7	8 -2 -2 -1	9 10 -0 -0 -1	-50 -50 -42 -16 -0	7 7 2 5	10 5 7	10 11 6	-56 -55 -46 -21	1 1 -2 -2 -5	1 7 1 2 5	5 0 1	-54 -51 -48 -24	-1 -5 -5	6 6 0 - 0	# 10 2 1	0	50	55 N.F	1. 45 40 6
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51.000 +0.000 50.000	-56.5 -44.5 -21.2	-57 -58 -50 -25 -9	-1 -2 -5 -4	2 5 -2 -0 -0	5 -1 2	-54 -56 -67 -22 -5	0 -2 -1	5 0 5 2	6 7 2 4	-52 -52 -60 -14	5 5 7 7	100	10 H	-58 -56 -44 -18 -2	-2 0 1 5	1 4 4 7 6	5 6 7	-55 -56 -45 -20 -1	1 -1 -1 2	5 5 5	6 7 5 7 6	5 6 5 5	* * * * * * * * * * * * * * * * * * * *	00 N.H	1.
10.000 20.000	-56.5 -56.5 -44.5 -21.2	HOLF -57 -54 -52 -24 -11	-0 -2 -1 -1	5 -4 -1 -4		-51 -55 -49 -24	5 2 -4 -2 -5	6 -2 1 0	A	- 69 - 51 - 61 - 15	1 0 4 1	9 6	11 11 7 10	-51 -56 -65 -19	-1 0 -0 2 0	2 4 1 5 1	1 5 6 7 5	-54 -55 -46 -21	2 5 -2 -0 -1	6 6 2 1 2	7 8 6 5	*		06 N.M 5 5 5	5 5 5
10.000 10.000 20.000	-50.5 -50.5 -44.5	-51 -51 -50 -25	-0 -0 -6 -4	5 -1 -1	-2 -0	-56 -56 -46 -20 -3	0 -1		6	-58 -44 -35 -9	-1 H 10 12	1 10 12 14 55	15	-60 -56 -42 -16	- 1 0 2 5 5	-1 5 5 8	1 6 0 9	-5H -56 -65 -1H -2	-1 2 1 4	2 6 5 7 7	\$ 8 9 9	5 5 5 5	21	15 N.M 3 4 5 5	
10,000	-50.5 -56.5 -44.5 -21.2	-58 -57 -49 -24	JAFF -2 -0 -4 -2 -1		5 -1 2	-57 -57 -45 -19 -1	-1 -1 -1 2	2 1 1 4 5	5	-61 -49 -34 -9	-5 7 10 12 11	-2 10 12 14		-61 -56 -41 -15	-5 0 1 6	-2 2 5 6	-1 4 7 9	-59 -55 -41 -17 -1	-5 2 2 4 4	-0 5 6 8 7	1 7 8 10 9	5 5	15	76 N.M 5 3 5 5	5 5 5 5 5
	-50.5 -50.5 -44.5 -21.2 - 4.6	-56 -58 -51 -26 -10	- 5 - 6		-0 -0		-0 -3 -0 -1	5 5 -0 2	1	-52 -52 -59 -15	5 8	8 10 10	12	-59 -56 -45 -17 -2	-2 0 1 4	1 3 4 7 6		-55 -56 -45 -20	1 1 -1 2	3 5 4	6 6 5 7 6	5 6 5 5	* * * * * * * * * * * * * * * * * * * *	3 4 4 3 5	

.O--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT OLVISION

NO. 06-7177

ENROUTE TEMPERATURES A	NO STANDARD	TO DEVIATION IN DEGREES CELSIUS AND COLLA CARRE
CHAOOTE TEMPERATURES A	NO STANDARD	DEVIATION IN DEGREES CELETIS ADD COLOR

HEIGHT IN FEET	15A	·  -		JANU	ARY		10	40		ENHO	UTE	16	MPERA	TUR	GREES					- 17			-		D DEVI	ATIC
		-	-	050	0/5	085	50	0 050	075	045	1 5	0 050	075	D6	5 50	05	TONER O D75	085	50	050	MUAL 075	085		AP		
GENEVA 53.000 40.000 50.000 20.000	-56. -56. -44. -21.	5 - 2 - 6 -	54	-6		-2 -0 -1	-54 -56 -48 -22 -7	-:	.;	6 1 5 3	-5 -5: -6:	:	10	10	-18		:	3 3 7	-55 -56 -46 -20 -5		;	1	55.00		***	N. #1
GENEVA 53,000 40,000 50,000 20,000 10,000	-50.5 -50.5 -44.5 -21.2	1777			5 -3 -1	****	-57 -57 -47 -21	-1 -3 -0	9 9	****	-51 -51 -30 -15		4 11 10	****	-50 -56 -65 -17	-20		25	-56 -56 -65 -19	-02	:::	5		:	124	:
10.000 20.000 10.000	-56.5 -56.5 -44.5 -21.2	-/ -5 -1		11 1	;	5	-78 -52 -51 -5 10	-27 ·	15	-19 7 16 16	-73 -55 -35 -7	-17	-15 15 15 15	14 14 15	-77 -54 -51 -4 10	-21 5 16 16	-10	10 15 15 16	7.4.27	-20	17	100	3 2 2 2	***	107	
10.000 10.000 20.000	-50.5 -50.5 -40.5 -21.2	-51 -51 -21		5 -	;	0	57 57 70 -1	-1-2	:		-57 -53 -58 -12 5	-0 * 6 9 10	7 * 11 12	10	-60 -36 -82 -16		-1 5 6	5 7	-38 -36 -31		**	::	*	:	•••	-:
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.000 -	36.5 36.5 44.3 21.2	-56 -54 -51 -79 -15	-0-11	-		-1		: .	:	0 -	57 51 18 12 5			:	**	3	-0	:	58 - 54 45 -	2			:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
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000 -2	0.5 - 0.5 - 1.2 -	51 54 50 29	-0 -5 -7	-2		-54 -51 -46 -25 -10		-0	. 0	-5	•			:		1 33	; ;	177	5 -1					• "		•
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00 -36		5 -1 5 -1			:	-52 -52 -50 -28 -14	****	-1	11 -7 -1	-51 -51 -47 -16	1		10	****	,,,,		10	-51 -51 -48 -20		-2	10 1	****			<b>*-</b> -*1	
0 CAYMAN 00 -56. 00 -56. 00 -44. 00 -21.	.5 -5	, -1		:	10	35	-17 2 9 13	-15 10 15	14 4 11 15 14	-12 -56 -11 -7	- 5	-14	-13	-76 -54 -51	-20 7 12	11	17	-11 -74 -55 -55 -7	-18 1 10 14	-2	-15 12 16		5222		M-M1.	
D CAYMAN 00 -56. 00 -56. 00 -44. 00 -21.	5 -5	-2	-1	0 1	-	24	-10 3 10 14	-17 -		-12 -56 -55 -1		-15 12 15 16	-14 2	-11 -54 -32 -6	-21 3 12 15	10 10 10		-75 -55 -54 -7	-19 - 2 11 15	11	-10	3 2 2 2	3 2 2 2 2		) N.MI.	

\*D--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIVISION

ND. 06-7177 PAGE 119

HETCHS IN FEET	154 TEMP		JA	NUARY	-	-	APRI	E NA	OUIE	16		TURE	_		OBER						SIAN		0EV1	A 1 1
GRAND		- (		0 075	085	50	050 0	75 08	5 9	50 05	079	D85	5	050	DIS	065	50	D50	NUAL D/5	085	1	APR	JUL	00
10.000 20.000 10.000	-56. -56. -44. -21.	5 - 1 5 - 9 5 - 9	77 -20 14 2 15 1 16 1	1 -19 4 1 11 1 15 1 16	-18 11 16 15	-10 -54 -54 -6	15		5 -5	6 1	13	15	-76 -54 -52 -6	15	14	-19 14 17	-16 -54 -33 -6	-20 2 11 15	-56 3 13 16	-17 13 16	3 2 2 2 2 2	3 2 2 2 2 2	652 7	
51,000 40,000 10,000 20,000 10,000	-50.5 -50.5 -44.5 -21.2	-5	8 -21 4 3 5 11 6 15 H 13		-14 5 15 17 15	-78 -55 -51 -6	55 1	20 -15 5 6 14 15 17 17	1	1	12	-14 15 16 15	-77 -54 -51 -6 10	-21 5 15 16	-10 16 17 15	-18 5 15	-77 -54 -52 -4			11.00	3 3 2 2 2 2	3 2 2 2 2	96 N	
10,300	-56.5 -56.5 -44.5 -21.2	-71 -54 -14	1 -21	5 12 16		-51 -12 -6	22 -2 3 13 1 15 1 16 1	5 6 4 15 6 17	- 55		-15 12 15	-14 15 15 16	-77 -54 -51 -6	-21	-10 . 10 17	10 10 10	-70 -54 -11	-20	-10 -	2727	3 3 2 2 2 2	3 2 2 2 2	70 N.	2 2 5
0.000	-50.5 -50.5 -44.5 -21.2	-75 -52 -51 -8	12	14	8 -	55 14 -8	15 -1, 2 ( 10 1, 14 ()	15	-73 -54 -52 -5 10	12	-14 4 14 17 15	-15 5 14 18	-75 -54 -52 -6 10	-17 -3 12 15	15	5	-75 - -54 -33 -7	52 15	5 5 55 56	1	5 5 5 2 2	32 3 3 2 2 2	5 97 N. 5 5 2 2	M1. 3 2 2 2
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0.000 -	-56.5 -56.5 -44.5 -21.2	-61 -55 -51 -6	1 14 17		5 -1 6 -	79 -2 52 52 1 6 1	5 14	-20 7 15 17 57	-78 -55 -52 -6 9	-25 - 2 12 15	3 14 16	4 .	-79 - 54 -52 -6 10	2 15 15	16 1		-54 -52 -5	3 15 1	20 -1 5 14 5 17 1	5	2 2 2 2 2 2 2	-	5 N.1	2 2 2
.000 - .000 - .000 -	50.5 50.5 40.5 21.2	-40 -51 -11 -1	14	22 -2 5 15 16 54 19	5 -5 6 -1	2	14	-1v 7 15 17 16	-11 -54 -52 -6	12 15	16	14 -	52 - 6	52 15	20 -1 4 14 1 16 1 15 1	5 -	- 6 5	5	5 6 6 15 7 16				, N. H	1.32222
.000 -	50.5	-50 -12 -11 -5	6 12 10 8	52 -10 V 10 15 14 12 15 V 10	-5	10	12		-70 - -51 -50 -4	17	4 17 1 5e 5	8 -	52 51	5 1	0 -1 6 1 7 1 5 1		70 -1 52 12 5 -7 1	5 5 5	0 -0 7 0 5 50 6 57		•	\$ 55 1 5 5 5	N.H	1.
.000 -	56.5 56.5 44.5 21.2	10 Hz -76 - -55 -16 -4	20 -1	0 51 5 16	-50 -30	10 15	11		-56 -15	15 1	5 5	5 -	12 5	2 2 1 5 1	5 14	-	6 -19 5 ;	- 1 1 5 2	7 -5a		2	2	2	2 2 2 1
000 -2	00.5	-75 - -56 -57 -9	18 -1	6 -15 2 5 7 0 1 14	-75 -55 -56	6	-14 - 10 14	10	-56 -12 -6	1	5 1	5		0 -10 2 1 1:	9 -17 5 4 5 15	-1 -5 -3	4 -1e 5 5 5 50 6 14	-1e -3 -51 -55	-15 3 52 55	3 2 2	2	942	5	3 2 2 2 2
900 -4	0.5 -	55	96510-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	7 -18 5 5 5 5 5	-76 -51 -11	-20 11 15	16	11 -	56 55 1	17 - 19 5 . 12 . 15 . 19	5 -19 2 2 5 19 5 16		8 -2 6 :	1 -19 3 4 1 14	-18 h 14	-7: -5: -3:	5 -20 2 3 11 5 15	-18 4 15	-17 6 13 56	5 2 2 2 2	3 2 2	857	N. P	2
000 -44 000 -21	6.5 - 4.5 - 1.2	7m -2 54 52 1 -5 5 9 1	2 -20 3 4 2 13 6 17 4 15	18	-77 -55 -11 -5	-21 4 15 16	6 15 18	15 -	74 -1 55 52 1 -7 1	7 -15 2 5 2 14 4 15 5 14	-14 4 14 55	- 7 1 - 5 6 - 5 1	7 -20	-19 4 15	-18 4 15	-52	-20 5 15	5 14 17	-16 -6 -55 16	3 2 2 2 2	2	1790	N. H1.	
16 MALA C 000 - Se 000 - Se 000 - Se 000 - Se 000 - Se	0.5 - 0.5 - 1.5 -	/2 - 1 56 59 12	ANGE 6 - 16 1 1 5 7 9 12 9 12	-15 5 6	-71 -56 -38 -10	-14 -0 0 6 11		-	/2 -1	5 - 14 1 3 2 15 5 16	-15 5 14	- 79 - 59 - 59	-58 2 10	-16 3 15 15	12 16	-/2 -55 -16	-16 1 8 12	3 10 14	-12 -13 11	5 6 2 5	5	1905	1 N.H5. 3 2 2	
11 MALA C 100 -56 100 -56 100 -44 100 -21	0.5 -9 0.5 -9 0.7 -	5	0 -18 2 3 7 10 8 15	11	-/5 -54 -54	- 19 - 2 10	-17 -1 3		13 -11 16 (	7 -16	-15 2 15	- /#		-20 14 16	-19 6 16	-76 -55 -34	-19 -2 11	-18 - 5 12	-17 -17 13	5 2 2	3	365 /	2	

•D--DIFFERENCE HEINFFN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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LABINIE	ILMPERATURES.	ANII	S I AMELARIA	OL WIATION	IN INCOLL	 	 £ 10 £ 1 €	 BOLLTES

the second secon	E NR UU	HE I	LMP	ERAIL	JRES	AND	514N	DARD	0f A1	ATIO	N IN	DE GR	tts	CELS	105	FOR (	GREAI	CIR	CLE	AIR F	OUTES		
HE 1GH1								ENROL	1 E	154	PEHA	1 UH E									STAN	DARO	OEVIATION
IN ISA FEET TEMP.		JANU		085	50	050	DES	085	50	050	0/5	085	50		0/5		50	050	NUAL	085	JAN	APR	JUL OC1
					1	0.10			1	0.20		-		0,0		0,	,,,	0,0		00,	-		
51.000 -56.5			0 C1	-18	-76	- 10	- 17	- 16	- 74	- 17	- 16	- 15	- 78	-22	-20	- 19	-16	-20	- 18	-17	3	5	571 N.H1.
40.000 -56.5	-55	2	•		-55	2	5		-56	i.	2	2	-54	3		- '	-55	5	3		2	ź	2 2
10.000 -44.5	- 56	9	10	11	-54	10	- !!	12	-55	12	15	1.5	- 25	12	14	14	- 54	11	12	13	2		1 2
20,000 -21.2	- 14	15	15	16	10	15	16	17	10	15	16	16	10	15	16	17	-6	15	16	16	2	5	i i
55,000 -56.5			-18	-17	-14	-16	-10	-15	-75	-16	-15	-14	-11	-21	-19	- 18	-15	-19	-17	-16	3	5	886 N.M1.
40,000 -56.5	-55	1	5	•	-54	5	5		-56	0	1	2	-54	2			-55	2	5		2	5	1 2
10,000 -44.5	- 36	1.5	14	10	- 55	10	11	11	- 55	12	15	15	-55	12	15	17	- 54	10	12	15	2	5	1 2
10,000 - 4.6	,	12	1.5	14	6	15	14	15	9	14	14	15		14	15	16	8	13	14	15	3	ž	i i
GUATEMALA CITY	10.0																600						916 N.M1.
55.000 -56.5				- 16	-75	-17	-15	-14	- 12	-16	- 15	-14	-11	-20	-18	-17	-14	-18	-16	-15	5	5	2 5
10,000 -56.5	-56 -57	!	2	5	-55	9	10	10	-56	12	1 1 5	15	-54	11	15	15	-55	10	. 3	. 3	5	3	1 2
20,000 -21.2	-9	12	14	14	-10	1.5	16	15	-6	15	16	16	6	15	16	10	-33	15	11	12	2	2	1 2
10,000 - 4.6		11	1 5	15		15	14	15	9	14	15	15		14	15	16	8	15	14	15	5	5	1 2
GUATEMALA CITY	10 M	H Y	DR.K																			1	792 N.M1.
51,000 -56.5			-	-12	-64		-10	-4		- 15	-11	-11	-15		-14	- 1.5	-/1	-14	-12	-10	5	5	2 5
40.000 -56.5	-57	-0	5	1	-56	0	2		-56	- 1	12	15	-55	5	11	12	-56	1	10	11	2	2	2 5
20.000 -21.2	-12	4	11	12	-11	10	12	15	-7	14	15	16	~ 6	15	14	15	-10	12	15	14	3	3	2 2
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\*D--DIFFERENCE BEIMELN INDICATED PER CENT HELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT UIVISION

NO. 06-7177

EMPOUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE ALR BOLLES

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\*D--DIFFERENCE BETWEEN INDICATED PER CEN? RELIABILITY TEMPERATURE AND INFERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-7177 PAGE 175

		ENRO	U1E	TE MP	ERAIL	JRES	ANO	STAN	DARO	0E V 1	AT10	N IN	0E G F	EES	CELS	sus I	FOR	GRE AT	CSR	CLE	AIR I	OUTES	
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LNROUTE	TEMPERATURES	AND STANDA	RD DEVIATION	IN DEGREES	CELSIUS	FOR GREAT	CINCLE AIR ROUTES

-	-		1	0016		FCRR	ORES	ANU	SIA	NUARU	DFA	ITALL	0N 1	N OE	GREE	S CE	LSIU	S FOR	GRE	AT CI	KCLE	AIR	ROUTE	S			
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\*D--OIFFERENCE BETWEEN INDICATEO PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

		ENRO	UTE	TEMP	ERAT	URE S	4H0	STAN	DARO	DEVI	4110	N IN	0EG	REES	CELS	IUS	FOR	GRE 67	CIR	CLE	41R (	ROUTES			_
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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERMATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD OCVIOTION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

	г	7	ENK	UIE	1EM	PEKO	FURES	● ND	SIAN	(JAA DI	Of A.	1011	ON I	N OL	GREES	CEL	SIUS	FOR	GREA	1 (1	CLE	41R	ROUTES			
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HONOLE 53,000 60,000 50,000 20,000	-50. -50. -66.	5 5 2	-/5 -/5 -55 -58 -11		Y - 1 to 5 12 15	10	-56 -57 -10	11	13	-11 10 14 14	-/3 -55 -56 -6	11	12	13	-51	10	11	12	-59 -56	15	10	11	3	3 2 3 3 3	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	.MI.
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•0--DIFFERENCE HEIGHEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

FAMILIE	<b>TEMPERATURES</b>	AMO	CIAMDARD	OF WIALIOM	-	DECREE C	 	 	 

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\*D--DIFFERENCE BEIWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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+D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

FAMCOOLE	IEMPERATURES.	AND	STANDARD	DEVIATION	100	MCALLE						
	TEMPERATURES	-		DETTAILOR		or out 6 2	CEFZIOZ	f UR	GREAT	CIRCLE	418	BOULES

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\*O--DIFFERENCE BETWEEN INDICATED PER CENI RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD AIMOSPHERE TEMPERATURE.

-		ENRO	UTE	1 E MP	ERAI	URES	ANO	STA	NDAND	DEV	TATE	0 N I	N OE	GREE	S CI	LSIL	S FO	R GR	EAT	CIRC	LE AI	R R	OUTE	s		
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+D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

	,	ENROL	ITE	TEMP	ERAI	URES	ANO	STAN	DARO	OE A I	4110	N IN	OEGI	LEES	CELS	IUS	FOR	GREAT	CIR	CLE	AIR F	OUTES			
HEIGHI	-								ENROU	I) E	164	PERA	TURE									STAN	OARO	DEVIA	HOLL
FEET	ISA 1EMP.	50.		DES	085	1 50	050	RIL	045	10	JU 050		045	1.0		DUER DIS				NUAL		7			
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.0.000	-50.5	-55	3			-55	2	5	6	-52	5	1	9	-55	3	-6	7	-55	3	-6	- 4			5	
20.000	-44.5	-35 -8	13	11	12	- 57	10	10	11	-+0	5	7		- 57		10	11	- 57	7	10	11	3	3	•	5
10,000	- 4.6	8	13	15	16	6	ij	13	15	-15	5	7	10	-10	11	13	13	-11	10	15	16	3	3	3	3
JOHANNE	SHURG I	0 800	F																						
51,000	-50.5	-12	-16	-14	-15	-12	-15	-15	-12	~71	-15	-15	-12	-12	-16	-14	-15	-12	-15	-13	-12	3	3	168 N	
10,000	-50.5	-54	5	10	10	-55	10	12	15	-51	12	14	15	-55	11	12		-55	01	. 6		3	3	2	5
20.000	-21.2	- 10	11	1.5	1.5	-9	15	14	15	-6	15	16	17	-8	13	16	15	-8	13	12	15	2	2	5	5
10,000	- 4.6	6	11	12	15	'	12	1.5	16		1.5	15	15	8	1.5	14	15	8	12	14	15	5	2	2	2
	SBURG TO									121				54										517 N	.HI.
51,000	-50.5	-75 -	- 17	-14	-15	-17	-15	-15	-11	-66	-9	-/	-6	-52	- 12	-10	- 15	-70 -52	-15	- 10	-8	3	3	3	5
10,000	-44.5	- 5 t	16	15	16	- 54	11	12	15	- 35	9	-11	12	- 55	10	12	13	-54	11	15	14	3	3	3	š
20.000	-21.2	-6	16	17	17	-8	13	14	15	-0	12	10	15	-8	13	15	15	-8	13	15	16	2	2	3	2
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55,000	-50.5			-14	-12	-71	-15	-12	-11	- 05	-4	-6	-5	-68	-12	-10	-6	-10	-13	-10	- 6		'	1 50 N.	
40,000	-56.5	-52			A	-55	. 5	6		-51	5	1	8	-55	4	6	1	-52		6		3	3	5	5
20.000	-44.5	- 51 -6	13	15	16	- 15	10	12	15	- 35	12	11	12	- 35	13	11	12	-56	10	15	16	3	2	3	3
10,000	- 4.6	10	14	16	16	8	1.5	16	15			10	ii	8	1 3	14	15	6	12	14	15	2	2	5	3
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0.000	-50.5	-74 -	- 14	-15	-16	-73	-16	-14	- 12	-72	-15	-15	-12,	-73	-17	-14	-15	-75	-17	-14	-12		•	•	•
10.000	-44.5	- 15	12	15	14	-55	12	14	15	- 50	14	16	17	-55	12	14	15	-52	12	15	16	3	5	5	3
20.000	-21.2	-4	1.5	16	15	-8	14	15	16	-5	16	17	18	-7	14	16	16	-1	14	16	17	5	2	2	2
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JOHANNE 5				-10	-15	-74	-14	-15	-15	-75	-16	-14	-11	-74	-17	-15	-14	- 15	-17	-15	-15		. 3	646 N.	. H1.
.0.000	-56.5	-55	\$	5	6	-52		6	6	-52	5		1	-55		6	6	-52		6	7	š	3	2	2
20.000	-44.5	- 35	13	11	12	-55	12	15	16	- 52	13	17	15	-35	12	15	16	-35	12	13	16	2	5	5	2
	- 4.0	d	12	14	14	6	1.5	14	15	9	14	15	15	9	14	15	16	¥	13	15	15	2	2	2	2
JOHANNE S	SBU"G 10	=1 NO	HOE	N.																				645 N.	
40.000			16	-15	-11	-70			- 10	-64	-#	-5	-6		-11	-8	-1		-12	- 9	-1				
		-52	12	14	15	-55	3	11	12	-52	5	10	11	-55		11	12	-52		12	1.5	3	3	5	5
	-21.2		15 15	16	17	-9	12	13	15	-12	9	11	12	-9	12	14	14	-4	12	14	15	2	2	5	2
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JOHNS10N					-17	-76	-26	-16	-17	-11	- 20	- 18	-17	-76	-19	-17	-10	-76	-20	-16	-17		41	14 N.	MI.
.0.000		-55			7	-54	2	5	6	-54	2		•	-54	3		5	-54	3	5	. 6	3	5	2	2
	-44.5		16	17	15	-55	11	15	14	- 52	12	14	17	-52	15	17	15	- 52	12	14	16	3	2	2	5
	- 4.0	9	14	15	16		13	15	15	10	16	is	16	10	15	10	17	10	14	15	17	5	2	5	5
KADENA 1		0 C11	٧																				61	729 N.	
55.000	-50.5	-54	-2	1	.2	-59	-2	0	2	-61	-4	-2	-0	-62	-6	- 5	-1	-60		-0	- 1	5		27 1.	
10.000	-44.5	-52	1	61	- 10	-55	3	5	7	-52	10	12	15	-55	6		10	-55	5	6	10		3	3	
20,000		-20	-0	4	6	-18	5	7	H	-9	1.5	15	16	-14	1	10	ii	-15		9	11	5		5	
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	-44.5	- 55	13	10	11	- 51	13	15	15	- 10	14	16	16	-51	13	14	15	- 52	15	16	15	2	2	2	2
	- 4.6		16	15	10	10	15	16	17	11	16	18	16	10	15	16	16	10	15	16	17	2	5	1	1
EANO 10	LAGOS																			-		_			
53.000	-56.5	-11 -			- 18		-20			-76				-11		-19		-11	-20 -	-19	-18	3	5	49 N.	H1.
10,000		-54 -54	10	11	12	-52	15	10		- 54 - 52	13	14	15	-52 -31	5			-55		5		5	5	2	2
20,000	-21.2	-8	1.5	14	15	-6	15	16	17	-5	16	17	18	-6	16	16	15	- 52	13	16	15	1	2	2	2
10,000			15	14	15	10	15	16	17	10	15	16	16	10	15	16	16	10	14	16	16	1	2	i	i
KAND 10 51,000			21	16	10		••			Net						2300								69 N.	
40.000	-56.5	-54	5		5	-11	-21 -	-19 -		-16 - -54	19 .	- 18 -	-17	-11	-21	- 19 -	-16	-11	-20 .	-18 -	-17	3	5	3	3
20,000			11	15	13	- 50	15	16	17	- 52	15	14	14.	- 10	14	15	16	- 51	15	15	15	2	2	2	2
10,000				15	16	10	16	16	16	-5	16	17	18	10	16	16	17	10	16	17	16	-	2	1	-
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51.000	-50.5	-71 -				-11				- 16 -		- 18 -		-11	-21	- 19 -	- 18	-11	-20 -	-19	-17	5	3	98 N.	M1.
10.000	-56.5		5 11	12	12	-52	3	7	8	-54	2	5	•	-52	5	6	1	-55		5	6	2	5	2	2
20.000	-21.2	- 1	16	15	16	-5	15	16	16	-52	13	17	18	-51	16	15	16	- 51	15	17	17	2	2	2	2
10,000	- 4.6	9	14	15	15	10	15	16	17	9	14	15	15	10	15	16	16	10	14	15	10	i	5	i	i
K4NO 10		2001			000	U.		5.5															16	159 N.	H1.
40,000	-56.5	-69 - -55	12 .	-10	-9	-67	-11	-9		-71 -	-15 -	-13 -	1	-10	-14 ·	-15	-13	-54	-15	-10	-0	3	3	3 2	5
30,000	-44.5	-42	3			-37		¥	10	- 53	12	15	14	- 56	9	10	11	-31	8	10	11	2	2	2	3
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\*D--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD AIMOSPHERE TEMPERATURE.

HEIGHT IN	154	-	JAN	IUAR Y		1	4PR	TL EI	NROU			PEKA		,				in the second		CLE A			_	DEVIATI
KAND TO	TEMP		0.050	075	085	50	050	015	285	50	050	015	085	50	050	UTS	085	50	050	O/S	085		APR	JUL 0
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KANO TO 54.00G 40.000 50.000 20.000 10.000	-56.5 -56.5 -46.5 -21.2	-65	0	-6	-> -> -> -> -> -> -> -> -> -> -> -> -> -	-64 -55 -60 -15	-1	5	6	-66 -52 -54 -8 10	-10 5 10 15	-8 7 12 15	-6 8 13 15	-07 -55 -18 -12	-10 2 6 10	-8 & 8 II	-/ 5 0 12	-60 -54 -59 -15	-9 2 5		-5 0 10	3 3 3	2 5 5 5	2 (05 N.H) 5 5 5 2
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THE BOEING COMPANY TRANSPORT DIVISION

		ENRO	UTE	TEMP	ERGT	MES	AND		Celo					REES	CELS	IUS	FOR (	GRE 6 1	CIR	CLE	AIR F	OUTES		EVIATI	I ON
HEIGHT	ISA			UARY	085	T.,	050	IIL	ENROU		JU	PERA LY 075			0C T	OBER		60	6NI	NUAL		7	<b>SPR</b>		)C 1
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53.000		-74 -54		-15	-14	-74	-18	-15	- 14 R	-15	-19	- 16	-15	-76 -55	-19	- 17	-16	-75 -52	-18	-16	-15	3	3	3	5
30,000	-44.5	- 56 - 10	8	10	11	- 55	11	13	14	-51	17	19	20	-32	12	14	15	-32	12	15	16	3	3	2	3
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SARACHI 55.000	10 LAH	ORE -69	-12	- 10	- 8	-67	-11	-8	-6	- 12	-16	-12	-11	-70	-14	-11	-10	-70	-15	- 10	-8		. 5	52 N.M	1
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	-56.5	-70	-14	-11	-10		- 12	-•	-7	-75			-12		-15	- 1 5	-11	-71	-14	-11	-9			77 N.M	:
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FAAACHI							_			L.,											112		18	N. N.	١.
.0.000	-50.5	-56	-8	- 5	-3	-54	3	-	A	-44	10	12	-11	-55	-11	-9	-7	-52	-11	-8	9		5	5	•
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	-56.5	-60	-5	-0	1	-58	-2	1	2	-61	-	-2	-0	-62	-5	- 5	-1	-60	-	-1	1	5.		36 N.H	
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	-21.2	-25 -A	-3	0	2	-18		7	8	-8	15	15	17	-15	6	•	10	-10	5	9	11	5		5	
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20,000	-21.2		-0	3		-16	5	8	10	-6	16	18	19	-15	8	10	11	-18	7	11	15			5	5
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20.000		-15		10	11	-55	15		16	-5		20	21	-7	14	16	17		14	15	17 18	3	5	5	5
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.D--DIFFERENCE BETWEEN INDICATED PER CENT RELIGBILITY TEMPERATURE AND INTERNATIONAL STANGARD ATMOSPHEAE TEMPERATURE.

		ENHO	UTE	S E MH	ERAT	URES	AND	STAR	OARO	) DE VI	A/10	)N 1N	• 0E G	REES	CELS	s t u s	FOR	GREA	r C11	ICLE.	AIR	ROUTES		
HEIGHT IN FEET	15A 164P.	50		UARY D/5	085			PAIL O OZS	ENRO		JU	LY	SURE D85			08ER		1		MUAL	085	STAN	DARD DE	
KAR H1 51,000 40,000 50,000 20,000 10,000	-50.5 -50.5 -44.5 -21.2	GAPO	RE -22		-19 5 15	-10	- 19 15	- 17 7 15	- 16 H		-21	- 18 7	-17 8 18		7 -22 7 -21 1 15	-20 5 14			- 21 3 13	-19 6 15	-17 7	3 3 2 2		7 N.H1.
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10.000	-56.5 -56.5 -44.5 -21.2		15 15 15	- 19 5 15 56 14	-1n 6 10 17	-11 -52 -11 -6 10	-20 5 13 15	-18 7 15 17 16	-16 H 15 17 16	- /4 -52 -30 -5	- IA 5 14 16 15	-16 7 16 18 16	8	-11 -55 -52 -6	12	-19 5 14 16 55	-18 6 15 17 15	-11 -53 -31 -6	-20 4 13 16	-18 6 15 17 15	-16 7 16 18	3 3 2 1	288, 3 2 2 2 2	3 3 3 3 3 3 3 2 2 2 2 2 2 2
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14 15 -52 14 15 -50 2 3 -49 3 5 -27 1 5 -15

4 / 6 10 -5 -1 -6 -2 -8 -5

PAGE 156

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THE BOEING COMPANY TRANSPORT DIVISION

10 -2 -3 -5

NO. 06-7177

ENROUTE TEMPERASURES AND SSANDARD DEVIASSON IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROLLES

		ENRO	UTE	IEMP	ERAS	unes	840	554H	DARO	DEVI	A5 50	DW 5N	DEG	REES	CELS	lus	FOR	GREAT	CIR	CLE	45R 6	ouse s				
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\*D--DIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD STROSPHERE TEMPERATURE.

ENROUTE TEMPERATURES	ANO STANDA	O DEVIATION IN	DEGREES	CELSIUS FOR	GREAT	CIRCLE AIR ROUTES

	-			_	ERAT	0463	ANO	3		000	~!!!		DEG	4663	CELS	103	FUR	GREA	CIN	CLE	AIR F	OO IF 2		
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\*0--DIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

			ENRO	UTE	TEM	PERA	TURES	ANO	STAN	DARO	DEV	1611	DN 11	DEC	REES	CELS	sus	FOR	GRE A	C   C	CLE	AIR	ROUTES			
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\$5.00	0	-56.5	-70	- 14	-12					-8	-68										-11	-9	3	3	,,,,	
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70.00		-21.2	-13		10			2 9		12	-7	- 14	15	16		13	15	15	- 50	11	13	14	3	3	ż	2
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20,000		-44.5	-34	15	12		- 3			18	-33	12	13	13	-32	13		14	-35	12	13	10	2	2	2	į
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\*O--OIFFERENCE METHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

			FNRO	UTE	I E MA	PERAI	URES	ANO	SSAN	DARD	OE V	BATIO	ON IN	OEG	REES	CELS	SIUS	FOR	GREA	1 (1	CLE	AIR I	ROUIES			
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\*0--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

PAGE 140

THE BOEING COMPANY IRANSPORT DIVISION

NO. D6-1111

		ENRO	UTE	LERP	ERAT	URES	4ND	STAN	DARO	DEVI	4110	N IN	DEG	REES	CELS	105	FOR	GREA	T C11	CLE	41R	OUTES			
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		-14		-5	-5	-25		-0 -1	3	- 14 -0		8	8	-50	-1	2	6	-25	-1	2	3		5	3	5
ENTYGRA																							17	15 N.	
	-50.5		-1	5 2		-54	2	5		-51 -51		8		-58	-1 0	1	5	-55 -55	2	5	•	5	•	3	
0.000	-44.5	-51	-6	-4	-2	-48		- Î		-40		1	3		0	5	5	-46	-1	2	:		6		3
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ENINGRA																								P9 N.	
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\*O--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL SIANDARD ATROSPHERE TERPERATURE.

	ENROUTE	1EMPER	STURES	ANO	STAN	DORD	OE A I	ATIO	N IN	OEG	BEES	CELS	IUS	FOR	GREA	CHR	CLE	AIR I	ROUTES			
HEIGHT	12.0					ENRO	UTE		PERA	TURE									SIAN	OBRO	OEVI	NO LT
FEET TEMP.		075 0	5 5	0 050	RIL	085	50	050	075	085	50		OHER		50		O 75	085	JON	APR	JUL	OCT
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LUNINGRAO TO 53,000 -56.5 40,000 -56.5 30,000 -44.5 20,000 -21.2 10,000 - 4.6		2	6 -52 2 -55 5 -56 6 -26		7 7 -3 -1		-46 -49 -42 -16	11 7 5	12	15 12 7 9	-55 -55 -67 -22	2 2 -1 -2	5 1 3 1		-53 -54 -48 -24	-3	,	5	5 5	•	376 N	5
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LEOPOLOVILLE 55,000 -50.5 40,000 -50.5 50,000 -44.5 20,000 -21.2 10,000 - 4.6	0 L108EV1 -77 -21 -50 5 -32 13 -5 10 10 14	-19 -1	5 -52 -30	15 17	-19 7 16 18 16	- 18 8 17 19	-75 -55 -52 -5	-19 3 12 10	-17 5 13 17	-16 5 14 17	-77 -52 -30 -4	-20 5 14 16 15	-18 6 15 17	-17 7 16 17	-77 -53 -31 -5	-20 4 15 16	-16 0 15 17	-17 6 16 18	3 2 2 1	3 3 2 2 2 2	3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
LEOPOLOVILLE 1 53,600 -56.5 40,000 -56.5 30,000 -44.5 20,000 -21.2 10,000 - 4.6	0 L1580N -72 -16 -55 2 -38 6 -11 10 5 10	-15 -1. 6 7 11 1.	-53 -34	5	-15 6 11 15	-11 7 12 14	-73 -53 -15 -6 11	-16 h 12 15	-14 5 13 16 17	-15 6 14 17	-75 -55 -54 -8	-16 3 11 13	-14 5 12 14	-11 6 13 15	-72 -55 -55 -9	-16 5 10 13	-13 5 12 14	-12 6 13 15	3 3 2 2 2 2		26 N. 3 2 2 2	.#I. 3 2 2 2
110POLOVILLE   53.000 -56.5 40.000 -56.5 50.000 -44.5 20.000 -21.2 10.000 - 4.6		-10 -6 4 9 5 6 9 10	-54 -57 -12	-11 5 7 9	-9 5 9 11	-8 7 10 12 12	-69 -52 -15 -7	-13 11 14	-11 6 15 15	-0 7 14 16	-70 -54 -56 -10	-15 3 9 11	-11 4 10 13	-10 5 11 13	-64 -54 -57 -11	-12 5 8 10	-10 5 10 12	-7	* * * * * * * * * * * * * * * * * * * *	3 6 2 5 5	149 N.	.MI.
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110-0010v1LLE T 54.000 -56.5 40.000 -56.5 50.000 -21.2 10.300 - 6.6	0 MUNICH -64 -15 -55 2 -41 6 -14 7	-11 -9 4 5 6 4 9 10 9 10	-54 -57 -11	-12 5 8 10 10	-10 5 10 12 12		-70 -52 -15 -7 10	-14 - 5 - 12 - 15 - 15	- 12 - 6 14 16 16		-71 -54 -55 -6 7	-14 - 5 - 9 - 12 - 11	-12 - 6 11 15 15	-11 -5 12 14 15	-70 -54 -56 -10	-13 - 3 R 11	-11 5 11 13	-10 6 12 14	3 4 2 3 5 5	31	57 N. 3 2 2 2	#1. 3 3 2 2
10,000 -21.2 10,000 - 10.5	0 MAIRORI -7R -21 -53 & -31 16 -5 17 10 15	-19 -18 5 6 15 15 17 16 16 16	-52	-21 -5 -15 -17 -14	-19 - 7 16 18 15	6	-75 -53 -32 -5 R	-1d - 4 12 16 13	-16 - 5 14 17 14	0	-77 -52 -30 -6 10	-20 - 5 14 16 15	6 16 17 16	-17 7 16 17	-77 -52 -31 -5	-20 - 14 16	-18 6 15 18 15	-17 7 16 16 16	3 2 2 1 2	13	01 N. 3 2 2 2 2	#1. 3 2 2 1
10,000 - 4.6	-78 -21 -54 5 -52 15	-19 -16 4 5 14 15 17 16 15 16	-52 -50 -5	-21 -4 14 16 14	16 16	R	-73 - -55 -12 -6	-17 - 3 12 15 12	- 15 - 5 14 17 14		-76 -53 -31 -6 10	-19 - 4 15 16 15	17 - 5 15 17 16	- 16 6 15 17	-76 -53 -51 -5	-19 - 4 15 16 14	-17 -0 15 17 15	-15 7 16 18	3 5 2 2 2 2	30 3 2 2 2	29 N. 5 2 2 2 2	MI. 3 2 2 2 2
LEOPOLOVILLE T. 55.000 -56.5 40.000 -56.5 50.000 -44.5 20.000 -21.2 10.000 - 4.6	C PAR15 -69 -15 - -55 2 -40 4 -14 7 5 7	-10 -9 4 5 6 7 9 10 9 10	-54 -57 -11	-12 · 3 · 8 · 10 ·	5 9 12	7	-70 - -52 -33 -7	- 15 - 4 11 14 15	-11 - 6 13 16 16	14	-10 -5% -35 -10	-14 - 3 9 12	-12 - 4 11 15	-11 5 12 14	-69 -54 -36 -10	-13 - 3 - 6 - 11	-11 5 10 13	-9 6 12 14	5 4 2 5 3	52 5 6 2 2 2 3	72 N.	MI. 3 3 2 2 2
LEOPOLOVILLE T 53,000 -56.5 40,000 -56.5 50,000 -44.5 20,000 -21.2 10,000 - 4.6	-77 -21 -54 3 -32 12 -6 15 10 14	-19 -18 4 3 13 14 16 17 15 16	-52 -30 -4 10	-21 -5 15 17 15	7 18 18 16	17 19 16	-76 - -54 -52 -5 8	12 16 15	15 17 14	14 17 15	10	-20 - 5 14 16 15	6 15 17 16	. 7	-77 -55 -51 -5	13	-18 -5 -15 -17 -15	-17 6 16 18 16	5 2 2 1	3 3 2 2 2 2 2	49 N. 5 2 2 1 2	MI. 5 2 2 1 2

.0--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDORD STMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CHACLE AIR ROUTES

	EMROUTE	TEMPERAT	URES 440	STANDARD	DEAIG			IEES C	ELSIUS	FOR	SRE 61	CIAC	LE SIR R	1	
HEIGHT ISA	100	IUARY	I AF	RIL	T	TEMPERAT	LURE		OC 1 ONE M		_	ANN	UAL	STANO	ARD DEVIATION
FEET TEMP.		075 D65		075 D65	50	050 075	085	50	050 075	085	50	D50 I	075 085	JAN	APR JUL OCT
LEOPOLOVILLE															3571 Manta
55.000 -56.5	-74 -20 -55 4		-53 4	-17 -16	-25	-15 -11	-10	-72 ·	-15 -13	-12	-53	-17	-14 -12	3	4 3 5
30,000 -44.5	-52 15 -5 14		-52 12		- 54	11 13	15	-33	11 15	14	- 33	12	14 15	2	3 2 3
20,000 -21.2	9 15		1 16	15 16		10 12	12	•	14 15	16	•	13	14 15	2	2 2 2
LEOPOLOVILLE	10 8DM														2775 M.MI.
55.000 -56.5	-71 -15		-70 - 14 -53 3	-12 -11	-72	-16 -14	-13	-72 -	-16 -15	-13	-71	-15 -	-13 -17	3	3 3 3
40,000 -54.5 50,000 -44.5	-54 2	7 8	-35 9	11 12	-32	13 16	15	- 54	10 12	12	-55	•	12 13	2	2 2 2
20.000 -21.2 10.000 - 4.4	-12 9		-10 11	15 14	1	15 17	17	-	13 14	14	-9	12	14 15	3	3 3 3
			' ''												5561 N.M1.
SECOPOLGAILLE SECONO - SA-S	-75 -16	-14 -15		-15 -12			-14		17 -15	-16			14 -15	3	3 3 5
\$0.000 -54.5 50.000 -84.5	-55 I		-50 S	12 12	-53	12 15	15	-53 -36	3 3	13	-55	10	12 12	3	2 2 2
20,000 -21.2	-11 10	12 12	-9 12	16 14	-6	15 16	17	-7	14 15	15	-8	13	14 15	3	2 2 2
10,000 - 4.4	• 11	12 15	7 12	15 14	"	15 14	17	•	15 14	15	•	15	14 15	2	
160POLOVILLE 55.000 -54.5	-77 -21		-71 -71	-19 -10	-75	-19 -17	-16	-17 -	-20 -18	-18	-17	-20 -	-16 -17		653 N. 81.
40,000 -54.5	-53 3	5 6	-52 5	7 .	-53			-52	5 4	7	-52		4 7	2	3 2 2
10.000 -44.5	-51 15 -5 14		-30 15		-52	12 16	14	- 50	15 14	17	-31	13	15 14	1	2 2 2
10,000 - 4.4	10 15		10 14	14 14	•	13 14	14	10	15 16	17	10	16	15 14	2	2 2 2
LEOPOLOVILLE !											12.0			-	2449 M.B1.
51,000 -54.5	-74 -18 -54 3	-14 -15	-74 -17	-15 -14	-75 -51	-19 -17	-14	-75 -	-19 -17	-16	-74	- 18 -	16 -15	3	3 3 3
10.000 -56.5	-5/ 0	7 10	-35 12	15 14	- 30	15 16	17	- 52	12 14	1.	-53	12	14 15	2	2 2 2
20.000 -21.2	-9 12 7 12		-8 14			17 10	17	10	14 15	16	-7	14	16 17	2	2 2 1
	-							12.							2227 0.01.
SS,000 -SA.S	-74 -17		-75 -17	-15 -14			-15		18 -15	-15			16 -14	3	3 5 3
\$0,000 -54.5 \$0,000 -84.5	-54 5 -37 7	5 .	-52 4 -55 12	15 14	-57	16 15	1	-55	12 15	1	-55	1	15 16	2	3 2 2
20,000 -21.2	-10 11	12 13	-0 15	15 15	-5	14 17	18		14 15	15		16	15 16	3	; ; ;
10,000 - 4.4	7 11	12 15	8 15	16 15	"	15 17	10	, ·	14 15	17	•	13	15 10	•	
1000LDVILLE 3	0 VIENNA		-08 -12	-10 -9	-70	-14 -12	-11	-n -	-14 -12	-11	-70	-13 -	-11 -10	3	3151 M.MI.
40.000 -54.5	-55 2		-54 5	5 1	-51	5 1		-50	5 .	5	-55	3	5 6	5	6 2 3
\$0,000 -44.5 20,000 -21.2	-11 4	9 10	-57 8	10 10	- 52	12 16	15	-55	12 13	12	- 56	,	11 12	3	3 3 3
10,000 - 4.4	2 1		5 10	12 12	10	14 14	10	7	11 15	15	•	11	13 14	5	3 2 2
LEOPOLOVILLE !	0 /URICH														3131 M.M1.
55,000 -54.5 40,000 -56.5	-69 -15 -55 2		-69 -12	-10 -9	-70	-14 -12	-11	-71 -	-14 -12	-11	-70	-13 -	-11 -10		3 3 3
50,000 -44.5			-56 B	10 11	- 53	12 13	14	-35	. 11	12	- 14		11 12	2	2 2 2
20,000 -21.2	-16 7		-11 10	12 13	10	15 14	17	;	12 13	10	-10	11	13 16	3 3	3 2 2
L 1046 VILLE 10			100												2515 N.M1.
55,000 -54.5	-71 -15		-70 -14	-12 -11		-16 -16	-13		-14 -14	-15			15 -12	5	3 3 3
40.000 -56.5 50.000 -44.5	-55 2 -3V 5	_	-55 S	11 12	-53	12 15		-55	10 12	12	-50	3	11 12	;	5 2 2
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40,000 -56.5	-55 I		-56 2	3 1	-52	11 12	15	-54	8 10	11	-54	7	7 11	3	3 3 3
30,000 -44.5	-42 g		-15 9	10 11	-1	14 15	14	-10	11 12	15	-11	10	12 15	3	3 2 2
10,000 - 4.4	2 6			11 12	10	15 16	17		10 12	1.5	,	10	12 14	3	3 2 2
LIMILVILLE 10		- 12 - 11	70	-11 -10		-14 -1-	- 1 -	_ 23	. 16 - 44			- 14	-12  -11		2505 N.M1.
55.000 -56.5 40.000 -56.5	-71 -16 -55 2		-55 5		-52	-10 -10		-51	-15 -14		-50	3	5 4		. 2 2
50,000 -44.5 20,000 -21.2	-15 9		-10 11		-31	12 15	17	- 55	10 11	12	-56 -V	12	11 12	3	2 2 2
10,000 - 4.6			7 11		12	16 10	18		12 15			13	14 15	2	2 2 2
LIMMFYILL 10	TUNES.				i						1				2184 N.M1.
55,000 -56.5	-72 -14 -54 2		-71 -14	-13 -12	-74	-17 -15	-14	-75	-17 -15		-72	-10	-15 -13	3	3 3 3
50.0005	-59 5	7 8	-54 10	11 12	- 32	15 14	15	- 54	10 12	1.5	-85	10	12 13	3	2 2 2
20,000 -21.2 10,000 - 4.4	-12 9	11 11	7 12		12	14 17	17	-6	15 14		-V	12	15 16	3	2 2 1
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55.000 -56.5	-69 -12		-68 -18			-13 -1)			-14 -12			-15		5	5 5 5
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10.000 - 4.6		9 10	3 10	11 12	111	15 17	17	•	11 12		"	•	., 14	,	
11M4 10 L1500 51,000 -56.5		7 -14 -14	-72 -10	-16 -15	- 70	-14 -12	-11	-75	-17 -15	-14	-12	-16	-13 -12	,	\$862 N.81.
40.000 -56.5	-55	1 4 5	-55 2		-54	5	- 5	-54	2 4		-55	10	4 5	1	2 2 2
30,000 -44.5 20,000 -21.2	-10 12		-9 15	14 15	-8	15 15		- 7	11 15	16	-8	15	12 15	2	2 2 2
10,000 - 4.6		1 12 13		12 15		15 14		8	15 14	15	1 7	12	15 14	2	2 2 2

\*O--DIFFERENCE BETWEEN INDICATED PER CENT RELIGNICITY TEMPERATURE AND INTERNATIONAL STANDARD ATKOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-7177 PAGE 145

HE 1G		15	A [	120	JA	NUAR	٧	TURES	-	PRIL	ENKO	UE_	TE	MPERA	TURE		-001-00						-				
FEE		TEM	-	50	*D5	0 07	5 D8	5 5		075	085	50	050	ULY 0 D/	Des	,	001	DER	nes			AUP		1		0 <b>0</b> EV	ITAL
11MA	00	-36		-10			1 -11							0.000			-			-	030		085	JAN	API	, 10	LO
40.00	90	-50.	.5	-50	7					-10	-0	-56			-1	-10		-11	-10	-69	-12	-10			27	5677	
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+0--OIFFLHENCE BETHEEN INDICATED PER CENT HELIABILITY TEMPERATURE AND INTERNATIONAL STANOARD ATMOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-7177

FMCOULF.	TEMPERATURES	AMD	STANDARD	DEVIATION	IN DECREES	CELSIUS	FOR CREA	I CHACLE A	R ROULES

		ENRO	VIE	TEMP	ERAT	ME2	AMD '	31 AM	DARD	DEAL	6T10	N IN	DE GI	REED	CELS	IUS	FOR	GREST	C180	CLE	OIR I	HOUTES			
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.D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

EMINDULE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CHICLE AIR ROLL	LIMIDULE	TEMPERATURES AN	D STANDARD DEVIATION IN	DEGREES CELSIUS	FOR GREAT	CIRCLE AIR ROUT
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5	1.000	-9	4.5	- /2 - 55	15. -15 ·	15 -		-70 ·	- 14 - 3	12 -		-/s -	-10 -	- 10 - 5	-13	-75 -	-16 -	-14 -		-12 -				5	\$	66 H.	3	
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\*0--DIFFERENCE BETWEEN INDICATED PER CENT RELIGBILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BDEING COMPANY PRANSPORT DIVISION

NO. 06-7177

ENROUTE TEMPERATURES	AND STANDARD	DEVIATION IN	DEGREES CELSIUS	FOR CREAT CIRCLE	AIR ROUIES

THE STATE OF		CHANG	ore	1614	CHAI	3		3100	JUNU	OE VI	-110	- 1-	000	4663	CELS	103	-	one o i	CIN	CEC		T	777=		
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\*D--OIFFERENCE HETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTE	ENROUSE	<b>ILMPERATURES</b>	AND STANDARD	DEVIATION IN	DEGREES C	CELSTUS FOR	GREAT CIRCLE ATR POUTES
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		ENR	DUIE	IEM	PERAI	URES	ANO	STAN	OARD	0E V1	ALLO	N IN	0E G	REES	CELS	105	FOR	GREAT	CIR	CLE	AIR F	OUTES		
HE 1GH1	1 ISA	_		NÜARY				H I L	NRO	UTE		PERA	TURE									STAN	OARO DE	TATION
FEET	TEMP.	50	-050	075	085	50	050		085	50		075	085	50	050	08ER 075	085	50		OT:	085	JAN	APR J	JL OCI
L0N00N \$5,000 \$0,000 20,000 10,000	-56.5 -56.5 -44.5	-58 -57 -50	- 1 - 3	- 3 - 0	-1	-56 -57 -66 -20	0 -0 -2 1	1	5 2 5	-58 -49 -36 -10	-? ? 9 11	1 10 11 13	2 11 12 14	-60 -56 -62 -16	-6 0 2 5	-1 3 5	0	-58 -55 -43 -18	1	5	7	5 5 5	1936	N.H1.
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£0N00N 55.000 N3.000 50.000 20.000	10 MA45 -50.5 -50.5 -66.5 -21.2	-57 -58 -44 -25	-1 -2 -5 -4	-0 -2 -2	-1 -2 -2	-55 -57 -67 -21 -5	-0 -2 -0 -5	0 5	6 6 2 5	-55 -52 -39 -13	5 6	7 7 10	7 9 9 12 11	-59 -56 -63 -17	-2 0	0 5	2 5 9 8	-50 -50 -65 -10 -5	0 0 -0 2	3 0 5	57 57	3		N. #1.
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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY

NO. 06-717

ENROUTE	TEMPERATURES	ANG	STANDARD	DEVIATION	18	DEGREES	C E4 S 1145	-	***	C10516	 

HEIGHI	15	L	_		NUA		-		APRI	EN	ROUT		EMPE	RATE			-10							ROUTE		O OEVI	ATIO
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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENKOUTE	1EMPERATURES	ANO	STANDARO	OEVIATION	1 N	OFGREES	CELSIUS	F 0.8	GREAT	CIRCLE	ALR	PATION

		ENTO	016	ICHP	ERAIL	JE 2	440	2 1 A-4	JAKU	OFAL	4110	4 14	DEGI	IEE2	CFF?	ius	FOR (	GREAT	CIR	CLE	AIR R	OUTES			
HEIGHI IN FLEI	ISA TEMP.			UARY 075	006	T		RIL	NROL	T -	JUI		13,51	T		OBER		T		WAL		STANC		555	
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.0 -- OIFFERENCE BEIMEEN INDICATED PER CENT MELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

		ENRO	UTE	IEMP	ERAI	URES	AND	SIAN	WARG	DEV	1411	ON I	N DE	GREES	CEL	s lus	FOR	GREA	1 (1	MCLE	AIR	HOUIES			
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\*0--OIFFERENCE BEIMEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177 PAGE 151

ENROUTE	<b>TEMPERATURES</b>	AND S	TANDARD	DEVIATION	IN DEG	REES CELSTU	S FOR	GREAT CIRCLE AIR POLICE	
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\*D--DIFFERENCE HETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-71//

ENGOUTE	TEMPERATURES	AND	STANDARD	DEVIATION	1 N	DEGREES	CELSIUS	500	COCAT	 	

HE IGHT	1	1	4001		HPER	TION		NU 51		ROUL					REES	CEL	510	5 F0	R GRE	AT C	IRCL	EAIR	ROUTE	5		
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\*D--DIFFERENCE GETWEEN INDICATED PER CENT "ELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES HEIGHT ISA JANUARY APRIL JULY OCTOBER ASNUAL FEEL TEMP. 50.050 075 085 50 075 085 50 075 085 HE IGHT STANDARO DEVIATION JAN APR JUL OCT MADRIO 10 SANIA MARIA 51,000 -36.5 -60 -4 40,000 -56.5 -5V -2 10,000 -44.5 -66 -2 70,000 -21.2 -20 1 10,000 - 4.6 -5 2 1030 N.M1. -61 -53 -57 -10 -4 5 H 11 12 -7 6 10 13 14 -62 -56 -40 -13 -3 3 7 10 -60 -57 -42 -15 -6 -0 5 6 MAUNIO IO SIOCHOLM 51,000 -56.5 -58 -2 10,000 -56.5 -56 -2 10,000 -84.5 -50 -6 20,000 -21.2 -26 -5 10,000 - 4.6 -10 -6 -55 -56 -46 -70 -51 -57 -40 -14 -56 -64 -27 10 11 10 PAUSIO 10 TENCHAN MAU410 10 TEHCHAN 71.300 -56.5 -5d -1 40,300 -56.5 -57 -0 10.000 -54.5 -4V -5 20.000 -21.2 -24 -5 10.000 - 9.6 -8 -1 -7 0 -0 9 -57 5 -57 -1 -65 2 -19 7 -2 -61 -69 -36 -2 10 13 0 -0 -1 7 5 #40#1D 1D 11; AV1Y=JAFFA 51,000 -50.5 -60 -5 -0 03,000 -50.5 -56 0 5 10,000 -40.7 -47 -5 -1 20,000 -21.2 -22 -1 2 10,000 -4.6 -5 -1 2 0 - 4 7 6 9 11 14 16 -51 ADRIO 10 IMPOUT 11.000 -50.5 -57 10.000 -50.5 -57 10.000 -50.5 -57 27.000 -21.2 -21 10.000 - 5.0 -5 \*2\* %.#1. -1 0 1 0 - 5 0 0 -62 -56 -40 -14 -71 -51 -0 -2 -0 #45#10 10 1#NIS 70.000 -5a.5 -5V -1 10.000 -5a.5 -57 -1 10.000 -4a.5 -47 -2 70.000 -41.2 -21 -0 10.000 - a.6 -6 -5 5 4 -54 -1 -57 -56 -16 0 . / -63 \*40\*10 10 VIIANA MANHUM 10 VIINAA 51-700 ->6.5 ->7 -1 60.000 ->6.5 ->6 -2 10.000 -46.5 -4V -5 20.000 -21.2 -25 -1 10.000 - 6.6 -8 -8 -5 -56 -56 -47 -20 -55 -7 0 -50 -47 -10 0 2 5 -56 000 16 440410 10 satsas 71.000 - 70.7 - 77 60.000 - 50.7 - 50 10.000 - 44.7 - 50 20.000 - 21.7 - 25 10.000 - 4.6 - 9 0 0 -0 7 -7 -57 -47 -71 05-00 -0 -3 -57 -19 -15 -56 -63 -17 07 \* 5 -50 -45 -19 MAD410 10 /URICH -56 -56 -66 -70 -1 -7 1 -56 -51 -16 -17 10 -56 -62 -16 -56 -44 -16 2 5 0 1 5 6 #8485544 10 5196AF0#E 55.000 -56.7 -61 -26 -24 40.000 -56.5 -55 2 1 50.000 -94.5 -11 14 15 10.000 -94.6 10 14 15 1010 N.#1. -2? 5 16 16 -20 3 14 10 -80 -54 -17 -6 -21 -40 -24 -22 -22 6 15 17 16 -54 -11 -5 15 -57 -11 7 11 16 7 15 16 -54 -51 -5 16 #ALIA 10 %16051a 51.000 -56.5 -60 -4 -1 60.000 -56.5 -56 1 4 80.000 -64.7 -67 -5 -1 20.000 -21.2 -22 -1 2 10.000 - 6.6 -6 -1 1 -50 -57 -65 -16 - 4d - 4d - 4d 0 -0 -0 -0 12 -67 -54 -41 -15 03200 11 15 16 15 -50 52300 505 .... MailA 10 KON; 51.300 -50.5 -50 -2 1 3 80.000 -50.5 -57 -0 1 5 80.000 -40.7 -64 -6 -1 -0 20.000 -21.2 -21 -2 1 1 10.000 -6.6 -6 -1 1 5 -5 -51 -51 -65 -17 -2 -50 -36 -10 10 MALTA TO INTPOLL 207 N.#1. 5 5 5 5 -2 0 1 71.000 - 70.5 - 61 - 5 10.000 - 56.5 - 76 - 1 30.000 - 44.5 - 46 - 2 20.000 - 21.2 - 20 1 10.000 - 4.6 - 6 1 -60 -56 -65 -10 -/ 10 13 15 16 -/ 0 5 H -66 -49 -34 -8 -9 B 11 14 15 -5 -50155 11 -56 -60 -15

-16 4 13 16 15 \*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

5480

53.000 -56.5 -76 -20 -18 -17 -75 -18 -16 -16 -75 -16 -15 -16 -77 -21 -19 -18 -60.000 -56.5 -55 2 5 4 -54 5 6 5 -56 0 1 2 -54 2 4 4 -16.000 -56.5 -56 9 10 11 -54 10 11 12 -55 12 15 15 -37 17 13 14 20.000 -21.2 -8 15 15 15 15 -7 14 16 16 -7 15 15 16 -6 15 16 17 10.000 -4.6 7 12 15 14 8 15 14 15 9 14 14 15 9 14 15 15

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THE BOEING COMPANY TRANSPORT DIVISION

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-75 -55 -54 -7

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NO. D6-7177

866 N.M1. 2 3 1 2 1 2

 EMROUTE	TEMPERATURES	AND	STANDARD	DEVIATION	IN DEGREES	CELSTUS	FOR	COCAT	 	

			Erent	DUTE	TEM	PERA	TURE	S ANI	STA	MDAND	DEA	LATI	04 1	N DE	GREE	S CEL	STUS	FOR	GREA	AT C	acı i	F A18	ROUTE	•		
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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

THE BDEING COMPANY
THANSPORT DIVISION
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		ENR	ROUTE	E TE	MPER	ATUR	S AN	O STA	NDARE	DE	/IAT	IDN I	N O	EGRE	ES C	ELSI	US F	OR (	GREAT	CIR	CLE	AIR	ROUTE	5		
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\*D--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

		-	EN	1001	I EN	PERAI	URES	AND	STAN	DARO	0E V	LATIC	9 N 1 P	OEG	REES	CELS	lus	FDR	GREA	T CIR	CLE	AIR F	OUTES			
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\*D--Ulfference Betheen Indicated per cent reliability temperature and international standard atmosphere temperature.

THE BORING CORPANY TRANSPORT DIVISION

NO. D6-7117 PAGE 157

LADALITA							
ENRUUIF	1EMPERATURES	AND STANUARD	DEVIATION IN	DEGREES CELSIUS	FOR GREAT	I CINCLE AIR ROUT	146

HE IGHT									NROU	TE			TURE									STAN	DARO	DEVIATION
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\*U--OIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

EMROUTE TEMPERATURES	4 NO	STANDARD	DEVIATION	1 4	DECREE					
				, ,	AE PHEE?	CELZIUS	FOR	GREAT	(10/15	 

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\*D--OIFFERENCE BETWEEN INDICATED PER CENT RILIBBILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

HEIGHT	0.555								NROU		TEM	PERA	112	r				_				STAN	OARO	0EV14	T10A
FEET	TEMP.	500	OSO	O/S	085	50	050		085	50	050	0/5	085	50		OBER O/S	085	50	050	O75	085	JAN	APR	JUL	961
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. O--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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+D--OIFFERENCE BESWLEN INDICASED PER CENS RELSABILISY TEMPERASURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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.D--OIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

PAGE 162

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THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-/1/7

ENROUTE	TEMPERATURES	AMO	STANDARD	MULATION		OL COCCC						
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\*D--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPLRATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES	AND STANDAR	DEVIATION	IN DECREES		CREAT CARCLE	
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•0--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-7177

C MIN CHATE	TEMPERATURES	AMO	CHAMDERA	DESTABLISH	2430330	/ 61 C 111C		COLAT	. lacre		
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		ENRO	ITE	TEMP	ERGI	URES	OND	5 1 6N	DARO	DE V I	<b>6110</b>	N IN	DE G	REES	CELS	102 (	FDR	GREAT	CIRC	CLE	AIR R	DUTES		
HEIGHT	150		JONE	JARY	-	7	OF.	RIL	NAOU		JU	LY	TURE	1	OCT	DBER		1	4NI	WUOL		STON	OGRU	DEAIOLID
FEET	TEMP.		050		085	50	050	075	085	50	050	0/5	885	50	050	075	065	50	050		D85	MAL	4PR	JUL OC
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\*D--OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENHALITE	TEMPERATURES	 CTAMOAULI	134 M G A S S S S S A S A S A S A S A S A S A	 DECREEC	CCI CALLE	500	CREAT	CARCLE	 - ALITEC	

-		ENRO	JTE	TEMP	ERATI	JRES .	AND	STANC	DARU	DEVI	ATTU	4 IN	DEG	EES	CELS	IUS I	FOR (	DREAT	CIRC	LE /	AIR R	OUTES			
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THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-7177

Section   10   10   10   10   10   10   10   1		_	ENRO	UTE	TEM		URES	AND	STA	NOARD	DEA	SATS	DM E	DEC	REES	CELS	\$ 5 US	FOR	GREAT	CSR	CLE	ASR F	OUTES			
Marice   1986										ENRO	UTE			TURE		54.5	19050	0					STAN	OARD	OEV1	ATION
Section   Printer   Prin			50				50			085	50			D85	50				1 50			065	JAN	APR	JUL	OCT
Note	55,000 40,000 20,000	-56.5 -56.5 -66.5 -21.2	-57 -57 -50 -26	-6	-5 -1	-5	-54 -44	-		3	-66	10	11 12 14	32 13	-54 -54 -67	-5	-0 3 5	1	-57 -54 -43	-1 2 1 3	2	3 0	5	3 5	3	u.ml.
Note   10   10   10   10   10   10   10   1	55,000 40,000 50,000 20,000	-56.5 -56.5 -44.5 -21.2	-58 -57 -49 -24	-1 -0 -5 -3	3 - 5	-1	-57	-0 -1	5	5	-35	10	10 12 14	11 13 15	-56 -62 -15	3	5		-59 -55 -43	2	5		5 3 4	3 5 3	429 N	3 3 3 3
Singer - San San San San San San San San San San	55,000 \$0,000 50,000 20,000	-56.5 -56.5 -46.5 -21.2	-54 -58 -51 -27	-7 -6		-2 -0	-56 -68 -22	- 5 - 1	-1	•	-51 -40 -13	5	7	10 51	-54 -45 -10	0	1	5	-54 -45 -20	-1	5 5	5	5 4 5	****	195 M.	.HI.
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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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<sup>\*</sup>D=-DIFFERENCE BETHEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

P466 168

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-717/

EMPOUTE TEMPERATURES AND STAMBARD DEVIATION IN DEGREES CELSIUS FOR CHERT CARCLE ARE HOLLES

_			ENROUTE TEMPERATURES AND STANDARD DEVICTION IN DEGREES CELSIUS FOR GREAT CIRCLE GIR ROUTES																								
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\*O--DIFFERENCE METHEEN INDICATED PER CENT RELIRBILITY TEMPERATURE AND INTERNATIONAL STANDARD REMOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177 PAGE 169 ENRUUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

	ENRUUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR													GREAT	CIR	CLE	AIR						
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\*D--DIFFERENCE HEIMEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROU7E	TEMPERATURES	-	374ND480	DEVISITON	18	DECREES	CELSIUS	-	COCAT	C10C1 6	 -

	EMROUPE PEMPERATURES AND SPANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE ATR ROUPES																								
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\*D---OIFFERENCE BETWEEN INDICATED PER CENT RELIGIBLITY TEMPERATURE AND INSERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

THE BOEING COMPANY TRANSPORT DIGISION

ND. 06-7177 PAGE 171

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE A	F ATR POUTES	
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.D.--DIFFEHENCE HETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-7177

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\*O---OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDORD ASMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ADMIT	CIRCLE ALR PRUTES	DEGREES CELSIUS FOR GREAT	DEVIGTION 1	STONOORO	TEMPERATURES AND	ENROUTE
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THE BOEING COMPONY TRANSPORT OLVISION

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-56 -56 -46 -20 0 -1

THE BDEING COMPANY TRANSPORT DIVISION

6576

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NO. 06-1117 PAGE 1/5

CHANNE	ACMOCD A TUDE C	AND STANDARD	DENIATION	 CELSIUS	FOR	GREAT	CIRCLE	AIR	ROUTES

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IN	ISA JEMP.	50	JANI	OFS	085	50	APR	IL			JUL 0 50	Y		50	050	BER D/S	085	50	050	075	085	JAN	APR	JUL	0¢
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\*O--DIFFERENCE BEIMEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

_	ENROUTE	TEMPERATURES	AND STANDARD	OEVIATION IN	OEGREES	CELSIUS FOR	CREAT	CIRCLE	AIR	ROUTES	

	T	ENRO	UTE	TEM	PERA	URES	ANO								CEL	s tus	FOR	GREA	CIR	CLE	AIR	ROUTES	•		
HEIGHT IN FEET	ISA TEMP.	-		UARY	, , 089	T	AP	WIL	ENROL		JU	IL Y	LURE			380		Τ.,		NUAL		7		0£ v 1	
	JANE 140 -50.5 -50.5 -44.5 -21.2	-	SAO	PAUL -14	.C - 12 - 14	-/2 ->1 -55	-10	-15 12 15	-12 13 15	-65 -52 -37 -12	- v	-6 7	11 12	-64 -54 -19	7 - 10	-8 9 13	15	- 69 - 52 - 59 - 9	-15	-9	15	JAN 4 5 5 5 2	APR	194	OC1
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0.000 10.335 23.303	JANE140 -10.7 -10.5 -40.5 -21.2		414 -21 -3 12 10	10AU -19 5 16 16	-17 6 15 14 16	-11 -52 -51 -5 10	-20	-1s / 15 17 16	-17 8 16 16	-71 -55 -12 -8	-14 5 12 15 12	-12 5 16 16	-11 6 14 15	-74 -94 -51 -0	-17 5 16 15	-15 4 15 16	-16 5 10 17	-/5 -55 -52 -6	-18 -13 -15 -15	-15 -6 -15 -17 -15	-14 / 16 16	3 5 2 2 2 2	3 3 2 2 2 2	270	i.#   . 
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ROME 10 W 55.000 - 40.000 - 50.000 - 70.000 - 10.000 -	36.5 - 36.5 - 46.5 - 21.2 -	27	- 6 - 7	-2 -1	- 3 - 0 - 1	-53	-1	5-0-2-2		- 5 7 - 5 1 - 10 - 15 - 5	5 5 8 8	10 10	10 9 12 11	- 56 - 56 - 45 - 17 - 2	0 1 4 2	1 5 6 7 5	5 8 7	-55 -55 -45 -20	1 1 -1 2 0	* * * * *	5	5 6 5	49444	09 N.	P1.

+0-- OIFFERENCE BETHEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE TEMPERATURES AND STANUARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR ROUTES

	- 1		ENRU	UTE	TEM	PERA	TURES	AND	STA	NUARI	O OF	VIATI	ON 1	N DE	GREE	S CE	LSIU	\$ FO	R GRE	AT CI	RCLE	AIR	ROUTE	s		
HE I GO		LSA	-	JAN	ÜAR	,	-		PRIL	ENRO	DUIE	16	MPER	ATUR	E								STA	HOARD	DEVI	ATIO
FEE	-	TEMP.	-			b 085	5			5 085	5 5	0 05	0 07	5 08	5			ER 75 DE	5 5		NNUA O D7	L 5 D85	JAN	APR	JUL	001
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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

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THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177

ENROUTE	TEMPERATURES	ANO	STANDARD	DEVISTION	IN	OE GREES	CELSIUS	FOR	GREAT	CIRCLE	AIR	ROUTES

		CHRU	016	IEMP	ERAI	OWE 2	ANU	210	UARU	DEVI	47.10		OEG	MEE S	CEL	SIUS	FOR	GREA	T CII	ICLE	AIR	LOUTE			
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ENRUUTE TEMPERATURES AND STANDARD DEVIATION IN DEGREES CELSIUS FOR GREAT CIRCLE AIR RO
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		ENR	DUTE	TEM	PERAI	UKES	AND	STA	DARD	DEA	MATIC	N IN	OEG	REES	CELS	Sus	FOR	GREA	1 (1	RCLE	AIR	ROUTES	,			
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+D--DIFFERENCE BEIMEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

_	ENKOUTE	TEMPERATURES	•NO	STONUORD	DEVIATION	1N	DEGREES	CELSIUS	FOR	GREAT	CLOCKE	410	

		ENK	UTE	IEMP	FMA	OKES	•NO	2101	NUORD	OEA	IATI	0 1	N OE	GREE	S CE	LSIU	FOR	GREE	1 CI	RCLE	AIR	ROUTES			
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\*\*O---OIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

THE HOEING COMPONY TRONSPORT OTVISTON

NO. 06-/17/ POGE 181

ENROUTE TEMPERATU	IDEC AND CT. WOAD	 ACCREES	CELCAME EAR	COCAT CARCLE AND	BALLTER

-		-		ENRO	UTE	TEM	ERAT	URES	ANO	STAN	DARG	0E V1	ATID	N 1N	0E G	REES	CELS	105	FOR	GREAT	CER	CLE	AIR	ROUTES			
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+D--DIFFLHENCE BETWEEN INDICATED PER CENT HELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE.

ENROUTE	TEMPERATURES	AND	376N068D	0EV14710N	IN	DEGBEES	CELSIUS	FOR	CAFAI	C18(15 A1	

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\*D--DIFFERENCE BETWEEN INDICATED PER CENT RELIABILITY TEMPERATURE AND INTERNATIONAL STANDARD ATMOSPHERE TEMPERATURE

THE BOEING COMPANY TRANSPORT DIVISION

NO. 06-7177 PAGE 183

## TABLE 6

AIRPORT TEMPERATURES FOR THE 0, 50, 75, 85, 95, AND 100 PER CENT PROBABILITY OF OCCURENCE BY MONTH, QUARTER, HALF YEAR AND YEAR

ABLE 6. SUMFACE RELIABILITY TEMPERATURE IN DEGREES FAMRENMETT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

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75	He									ė		10							80
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)	54	10	4.1	54	50	30		50	50	12	71	71		1/4	4.4				
9	67	e 1	65	6.5	"	41	**		15	0.5	60	-	15	6.0	56	. 5		.5	10
,	44	64	/ 1	10			100		-	79	90	el	V 5	**	10	• •	"	45	14
	71	/1	15	11	es ?	01	10 1		43	101	715	44	7.	44	64	13	45	43	40
)	41	14	47	*1	43	10-	139	10.	100	104	99	-	104	*0	He VI	70	• /		94
	In	84	- 1	71	106	515	116	116	116	117	100	102	117	100		46		105	101
	e ==	15	10	"	43	101	107	101	•	101	45		95	41	96	45	44	117	517
	0404														10			•	•0
	23	51	11	21	7.	5.	6.5	24	21		50	>>							
	51	•/	9.00		57	<b>a</b> 1	7.0	.1	33		77	10	75	• 7	44	55	15	15	21
	51	35	23	55	50	00	14	71	67	70	8.1	64	45	61	• •	0.0	• •	71	0.5
	40	31	60	60	0.5	14	45	10	70	41	80			45		• /	77	6.1	14
	11		6 -	10	15	45	9.1		6.5	VI	91	70	V5	*2	14	70	61	05	7.0
	24	10	15	45	*0	101		105	105	107	104	104	199	101			05	75	VI
		, -		20	•0	75	4 5	15	00	41		.0		40			00	44	100
15 400		Int a	4505															-	•
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•	45		45	45	. 0	5.5	61	44	41	•0	64		0.5	•0	57		52	31	50
	4/	./	47	48	51	36	64	51	51	0.0	69	0.3	60	05			• 1	67	62
	51	51	57	25	57	6.5	75	67	10	69	13	71	15		.0	52	45	12	61
	53	33	50	50	65	14	44	44		70	11	70	60			51	15	61	74
•••	4.1	40	41	41		52	60	51	47	05		90	65	24		65	••	¥5	45
	. AL	0 5 E A											••	••	50		50	•1	54
- 1	15 -		14 -	. 10	-27	-21		22	- 19	**									
		1.5	14	15	25	15	•	55	25	51	15	51	51					-21	- 54
	75	15	12	26	10			49	4	34	31	50	56		56 2	77	15	45	55
		10	17	15	.0	57	61	55	4.6	40	6.5	62	9.5			55 (		.1	52
		41	40	4.5	41	34		67	62	17	75	45	• •			SR S	5 5	00	59
		>6	31	57	30	0.5		82	11/	85	N 5	13	1:				5	10	71
•• >	0	20	11	25	54	44		44	55	0.5	05	44	64				15	46	#6
															15			51	4.5
- 1				13	5	20	51		11	35	••	40	15	29	71	0			
		17	10	54	41	57	61	51	. 7	66	15	7.5	70				0	0	-15
				45	51	60		6 5	50	14	.0	e 1	19				9	77	35
4				30	9%	64	71	64	6.5	11	. 5	4	0.5					85	68
*				64	M()	14	41	74	76	86	90	41	90	As .	76 6	9 8		91	14
3				41	51	65		67	52	78	99	00	100	96	9 /	8 9	. 1	00	100
3	5										-	•			9	1 6	병	16	64
	5		1.																
9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	5.,	5. w.	1.	ادة	A2	. 4		4.3											
GUA 1	5	8. w.	61	67	67	65		62	67	66	10	69	00		1 5	9 5	9	59	50
GUA I	5	8. <b>4.</b> 6? 77	67	67	PH	19	HI	14	F ts	H2	61	112	HI	H2 1	11 /		9	59 61	50 70
GUA I	5	8. •. 6? 77 60	62 11 n0 n2	"	FH BI	79 85	H 1	74	7H H2	86	H 1	45	H1	82 E	16 8	10 H			19
GUA 1 6 7 H H	5	8. w. 67 77 10 57	62 77 n0 n2	"	PH	19	H I H 3 H 6	7 Y H b H b	7H H2 H4	H2 86 88	#1 #6 86	87 85	85 87	82 8 87 8	16 F	14 E	6	b I	
GUA 1 6 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	5	8. w. 67 77 10 13 13	62 73 n0 n2 n6	77 #1 #2	## # 1 # 5	79 85 85	#1 #5 90	74	7H H2	H? 86 88 89	H 1	45	H1	82 8 85 8 87 6	11 / 14 d 16 ft	16 H	6	6 I	19

\*1DT-FIRST QUARTER DEC-JAN-FEB \*\*HF--FIRST HALF YEAR DEC---MAY \*\*\*ADM--AVEHAGE DATLY MAXIMUM

	SURF		11100	ILITY	IEAPE	ROTUR	E 17	UEGREE:	FAHREN	MEIT F	DR G1	VEN P	ROBABI	LITTE	S OF	NOT 6	EING	EXCEEDE	0
PROB	DEC	JON	FEB	101•	MAR	APR	MAY	2QT	1HF.	NUL	JUL	AUG	SQT	SEP	OCT	NOV	401	2HF	ANV
ORUBA,	NETI	IERLA!	00 ON	TILLES	0.5	68	70	63	65	.71	72	7.1	71	71	••				
50	80	19	14	19	14	81	82	81	80	8 5	82	83	85	1	85	68	83	85	63
85	82	85	87	82	85	85	85	85	86	85	85	86	86	87	86	84	86	86	86
45	87	85	87	87	87	88	90	91	90	90	89	91	90	91	88	86	91	91	87
100	91	87	84	91	90	91 86	96	85	96	87	81	95	95	90	94	92	96	96	96
& SUNCT				1:50		-	•	0,	04	• • •		88	87	39	85	25	80	87	86
50	87	54	52	87		• 2	50	30	54	29	24	30	29	57	56	45	57	29	29
15	90	VO	90	91	81	85	68	76	76	4.5 7.1	75	48	74	80	85	78	84	80	74
45	94	95	45	94	91	86	80	88	95	75	77	81	70	84	87	89	80	84	
100	110	130	100	101	100	104	88	100	100	98	105	89	88	95	75	97	74	94	98
40400	94	95	44	9.	42	84	"	44	84	72	76	78	75	85	84	108	100	80	110
41145	641	ECE		20					1.27	4		100							
50	52	20	51	50	20	60	42	90	20 55	74	58	01	50	15	45	50	50	30 73	20
45	60	55	56	57	61	A	76	7.1	45	. 5	67	67	86	81	75	45	74	0.5	75
25	65	57	65	60	72	70	86	76	02	95	90	90	90	85	7.	70	80	*7	92
100	71	0.0	75	13	8.5	91	101	101	101	109	106	107	109	105	95	.7	105	109	109
•0••••	57	50	55	55	●0	47	"	66	67	85	₹0	90	88	8.3	14	44	76	81	71
0	66.	-2	5. 0.	- 9		25	16	8	- <b>V</b>	59	54	55	39	4.5	14				
50	45	45	*1	45	55	62	70	61	55	76	60	19	19	74	26	52	45	71	62
45	55	56	59	54	65	71	81	10	68	90	85	65 e7	88	82	12	. 5	11	66	78
45	66	04	71	70	7.0	82	66		8.	76	**	93	¥7	97	7.0	14	82	97	95
100	54	55	50	54	65	71	01	72	65	102	89	102	105	102	95	62	102	105	105
406+144			LAND	674				••	•	9.1				7.	7.	42	75	#1	12
0	. 5	45	47	4.5	42	50	50	50	50	35	5.5	54	55	54	50	+1	54	5.5	5.5
75		12	12	71	71	67	57	67	70	58	51	52	57	55	58	•0	57	55	59
85	13	15	75	14	75	34		76	73	40	57	58	50	42	05	45	66	61	70
100	43	40	*1	90	7.	10	15	80	90	64	41	42	4.5			75	12	70	78
	70	75	71	12	71	47	62	47	49	58	50	54	57	60	0.5	00	0.5	00	45
6464040													ĺ						
50	51	50	2.5	52	27	57	51	27	61	50	62	64	50	51	30	2.9	2.0	2.0	10
15	41	51	61	61	8.6	40	₹0		75	97	101	100	100	74	77	75	57	***	75
45	71	61	73	75	71		**	67	7.	101	104	104	104			74	.5	101	92
100	70	11	46	n.	₹0	104	101	112	92 112	104	111	110	121	106	107	94	102	110	121
.04		0.0		61	71	45	47		7.5	105	110	110	108	104	+2	11	*1	100	87
0		71451	44 GU						65										
50	4.0	65	45	61	51	11	65	51	70	70	75	75	70	71	85	56	58	36	70
75	64	6.5	70	70	10	45	.0	No.	70			47	97	. 5	87	.0	89	**	80
85	71	71	91	75	77	95	9.5	76	85	102	10.	100	99			81	92	97	92
100	44	65	**		45	105	108		108		112	105	105	102	105	97	100	115	101
04	47	6.6	70	6.9	75		45	94	74	76	9.9	100	78	76	90	82		40	85
0		). u		-	14	24			140	1.2		-2			.72.				
50	50	5	55	35	10	25	55	5.5		12	52	74	10	57	57	15	57	15	55
45	**	**	. 5	45	51	60	71	0.5	56	7.9	8 5	# 1	81	7.4	45	50		7.	49
95	50	57	50	50	55	14	75	79	75	82	92	91	91	80	16	58	75	82	75
90	74	70	7.	76	79	<b>9</b> 0	95	95	95	**	102	100	102		.2	7.7	**	102	102
04444		• 5	**	***	55	6.5	75	6.5	55	85	87	05	85	78	67	55	67	76	65
O	52	52	52	52	6.4	49			4.7										
50	69	69	75	70	56	62	65	80	52	70	7.5	14	75	61	58	52	52	52	52
85	10	70	74	75		46	85	86	61	80	11	7 7	19	11	78	76	78	80	81
95	61	61	76	78	91	95	95	89	91	89	12	85	81	10	84	82	80	83	91
00	84 79	90	40	94	40	101	102	102	102	100	92	90	100	91	90	88	.1	100	102
			0.0	62	<b>Q</b> 1	¥ \$	92	92	87	85	82	82	85	82	87	80	81	82	85
O O	52	1LANO	56	52	62	67	71	62	52	70	71	12	70	69		56			
50	95	70	62	01	8.	86	85	85	85	80	85	8.5	8 5	8 5	82	80	56	96	52 83
75	45	81	91	91	90	95	45	91	90 93	87	87	86	87	86	86	85	87	88	90
95	46	92	97	41	97	94	97	99	99	95	93	92	89	88	95	92	90	91 95	95
	100 117	89	106 91	106	106	106	106	106	91		90	99	101	98	100	99	100	101	106
BARBADOS								45	•	••	3615			• •	00	01	98	89	90
0	00	61	61	61	62	64	66	62	61	67	68	69	67	67	67	66	66	66	61
	11	11	76	80	78 81	82	80	85	78 82	81	60	81	80	81	80	19	80	80	79
50		AC.					0.3	0.3	rt./		8 5	8.	84	8.	8 5	82	85		
50 75 85	80 82	81	80	82	83	84	85	84	83	85								86	85
50	80										84 87 90	85 89 95	86 89 75	85 88 91	84	85 86 89	85 88 92	85 89 95	85 89 95

<sup>•19</sup>T--FIRST QUARTER DEC-JAN-FEB ••1HF--FIRST HOLF YEAR DEC---MAY •••ADM--AVERAGE DAILY MAXIMUM PAGE 188

PROB	OEC	JAN	FEB	101•	MAR	APR	MAY	207	1HF • •	NUL	JUL	AUG	307	SEP	007	NOV	4QT	2HF	ANN
BARCEL		SPAIN												<del>                                     </del>					F.,
50	25	24	20 51	24 50	32	55	4.1	32	24	4.0	54	56	49	49	19	31	31	31	24
75	51	55	56	57	50	58	70	59	62	70 76	75 80	76	7 <b>4</b>	77	65	56	72	78	62
85	60	58	50	60	63	66	7.5	69	67	79	85	83	83	79	75	65	75	81	75
95	65	63	66	67	69	75	80	77	76	85	88	89	89	8.5	77	71	61	89	85
100 A0M•••	73	56	57	57	61	82	90 71	90	90 61	95 77	81	98	98	78	82 71	80	70	98 75	98
BARKAN	UILL	A. CO	L 0481	A	127														
0	80	0.0	68	66	67	88	68	67	66	69	70	69	49	48	68	70	68	68	66
50	85	82	82	88	8.5	84	85	84	8.5	85	85	86	85	86	84	84	8.	85	84
75 85	86	88	85	88	88	88	89	88	87 90	89	89	90	91	90	88	87	89	89	88 91
95	92	92	91	92	92	95	94	95	94	95	95	96	94	76	74	92	95	96	95
00	96	90	97	98	98	102	100	102	102	100	101	102	102	102	99	*8	102	102	102
ASLE.		ER'LAI			٠.	**		**	***	*,	**	74	**	**	**	٧.	•2	•3	77
0	-6	-11	-11	-11		22	27		-11	57	41	38	37	50	22	13	13	13	-11
50	30	50	50	35	. 3	50	58	50	42		67	67		61	51	42	51	58	50
75 45	47	**	51	49	52	58	70	61	56	71	7.	76	74	49	59	4.	41	70	45
¥5	55	56	58	57	65	72	78	77	67	75 85	78	78	87	73	6 S	52	78	75 86	72 85
100	65	66	67	67	7.5	87	92	92	92	101	102	102	102	95	85	71	*5	102	102
04000	39	59	45	•0	52	•0	68	60	50	74	78	77	76	70	59	47	59	47	50
ASRAH,			20								•••								-
50	59	55	28	57	56	10	86	75	24 66	91	72	92	92	58	19	38	36	38 85	24
75		62	00	45	75	81	95	85	77	94	99	98	78	9.	88	70		76	88
85	49	65	6.5	• •	76	85	99	90	8.5	••	102	101	102	98	92	80	95	101	
95	85	81	87	76	95	105	105	100	. 95 114	105	110	109	110	105	101	87	105	110	104
04000	89	*	68	67	75	85	96	85	7.6	115	12.5	105	103	102	94	**	92	125	123
EIRUT,		404																	
50	50	51	50	58	60	65	71	65	90	56	80	62	50	●0	52	• 1	41	61	30
75	07	0.5	00	65	67	72	78	76	71	82	84	80	85	80	75	67	74	74 85	**
85	70	05	68	69	71	75	82	7.0	76	85	85	88	88	87	84	76	85	88	84
95	7.	70	75	76	81	84	91	89	88	92	91	95	94	92	V1	82	92	95	95
00	65	95	65	65	97	72	107	107	68	85	87	89	104	86	81	71 73	101	85	107
ELEM.	64A/1																		
0			66	66	00	69			••			.7	60	45	67	47	45	64	64
50	81	80	79	80	80	00	81	80	60	80	80	80	80	80		81	80	80	80
75 85	84	85	84	85	85	85	84	86	86	85	85	8.5	84	8.		84		84	
95	91	89	88	90	89	89	89	49	90	84	87	89	89	86	90	70	71	86 71	91
00	*7	95	94	97 87	45	95	94	95	97 87	. 5		95	95			97		78	-
				••				87	••	80	86	86	88	8.9	89	70	89		88
ELFAST	21	IRELA	NO 15	16	21	25	25	21	14	52	41	57	52	50	20	24	24	24	
50	.2	549	58	50	42		52	•	. 5	••	50	56	50	55	50			52	14
75				45	.7	51	58	55	51	51	65	. 5	●0	60	55	4.0	56	59	50
85		• •	**	•7	50	55	61	57	55	55	65	66	6.5	65	57	50	59	62	●0
95	52	50	50	51	55	59	77	77	65	62	75	71	70	48	95	5.3	65	70	**
D#	••	.2	. 3			55	50	51	. 8		05	44	44	75 61	55	57	75 55	82 60	54
ELGRAD	E. YU	GOSLA	VIA																
0	- 5	- 2	-10	- 16		21	24		-14	1	4.0	45	61	35		12	•	•	-16
50 75	55	10	45	45	54	65	72	54	58	76	75	72	71	75	56	**	56	0.5	5.
85			50	••	58	.7	75	70	64	79	83	0.5	85	77	72	55 59	72	76 82	70
95	57	52	>8	58	67	76	45	60	76	87	90	92	92	85	-81	49	82	9.5	<b>*0</b>
00 04+++	40	57	58	59	55	85	92	92	51	79	105	107	107	7.	45	85	**	107	107
EL17E.	8411	154 4	04004								(10.1				•	•	••		
0			49	.9	50	59	.0	54		-	62	60	•0	40	58	52	52	52	
50	75	10	76	75	78	60	81	80	77	81	81	82	81	81	79	76	78	00	78
75	80	00	92	01	8.5	85	84	85	8.	85	85	84	86	85	84	-1		44	85
85 85	87	82	88	65	90	87 91	91	92	86 91	87 91	87	92	88		86	84	87	88	86
00	92	90	95	95	95	97	**	97	97	97	95	96	97	97	96	86 75	97	41	97
04+++	81	81	82	81	8.	86	87	86	85	87	87	88	87	87	80	8.5	85	84	85
ENGAST.	. L16		41				-												
50	60	58	58	58	67	60	71	37	57	55	57	60	55	52	51	•5	45	45	57
75	64	61	6.5	65	69	74	78	75	70	76 82	78	79	77	74	75	47	72	75 83	48
85	67		66	00	75	78	82	79	75	85	86	87	87	86	82	76	.5	87	82
75 00	71	69	12	12	84	88	92	90	87	94		90	95		89	84	92	95	85
00 0m•••	78	76	64	82	101	105	108	108	108	10 <b>9</b>	105	105	109	83	83	74	106	82	109
EHGEN,	NORM	AY								400				A64.	100			77	-
0	6	7	3		10	15	25	10	3	55	59	59	35	28	22	21	21	21	3
50 75	37	55	35	56	38	45	5.5	45	40	58	62	60	60	55	48	41	48	54	47
85	**	42	42	45	48	52	60	58	50	68	71	66	70	61	54	46	55 59	62	58
95	55	49		53	50	64	70	67	65	76	78	75	77	70	61	53	67	67	74
			54	62	68	77	81	81											
00 0M•••	45	56	44		47	55	64	55	81 50	89	89 72	85 70	89	79	57	59	79 57	89	89

<sup>• 107--</sup>FIRST QUARTER DEC-JAN-FEB •• 1HF--FIRST HALF YEAR DEC---MAY ••• ADM--AVERAGE DAILY MAXIMUM

PRO8	DEC	JAN	FEB	191+	MAR	APR	MAY	201	IHF••	JUN	JUL	AUG	397	SEP	OCT	NOV	194	2HF	ANN
BERLIN.	GER				111111							-							
0	- 5	1	-15	-15	59	20	28	47	-15	35 61	65	65	65	57	15	38	40	55	-15
50 75	5 5 4 1	5 I 58	35 45	32 43	47	54	63	58	5.5	4.5	71	69	70	45	54	45	50	67	68
85	51	41	54	54	51	51	57	65	60 73	7 1 80	74	72 81	74 83	70	67	55	74	7 2 0 2	80
100	58	55	95	62	7.5	85	45		92	9.5	96	94	96	94	77		••	94	96
DMoss	37	35	38	37	46	55	65	55	46	70	74	12	72	65	55	4.5	55	45	55
EMUDA	. BE	HUDA	40	40	   61	42	49	41	40	58	62	62	58	50	53	49	49		40
50	65	6.3	63	64	6.1	65	70		65	75	79	80	78	78	74	49	74	76	70
15	70	68	86	71	71	71	15	12	71	70	84	87	85	83 85	70	75	60	82 85	76 81
85	12	71	75	76	76	79	82	80	80	86	91	92		*0				• :	
00	81	81	81	81	84	87	88	88	88 70	92 81	98	99	99	**	7.0	70	70	62	70
				•		•		••		7.7	1.54	197.7	7.5						
0	ST	N	59 59	57	37	28	22	22	22	16	17	10	16	21	28	35	21	14	10
50	80	81	71	72	70	40	53	40	70	50	54	61	57	50	73	75	73	74 71	12
85	83	8.	62	8.	78	71		73	. 1	50	58	.5	. 1	71	11	70	11		17
95	89	100	88	100	73	76	81	91	100	18	75	60	60	79	95	85	95	01	100
100	45	44	8.5	85	79	71	66	7.5	79	42	41	.7	45	73	76	91	11	70	74
106014.		-						6.7	025	29		4.4	16.		33		100	N/A	
0	40	40	59	58	59	59	50	59	58	58	57	58	50	50	50	58	50	56	58
50 75	58	58	61	95	0.3	63	42	6.3	6.5	42	. 1	. 1		61	42	42	•2	41	
85			.5		45	65	68	65	45	67	62	0.1	0.5	67	67	4.5	47	67	45 49 75
95	68	10	75	75	75	15	74	75	75	12	72	72	72	73	13	73	73	73	75
0#+++		.7	66	61	67	67	66	67	67	45			•5	23	2.0	86		45	**
D-84 V .	1 NO I									••			••	<b></b>	70				53
0	55	5.5	55	70	70	8.5	71	62	53	70	61	81	42	71	61	44	31	95	
15	8 3	80	81	82	8.	80	89	87	84	86		. 3	85	8.5		85		84	47
65	85	83	83	80	92	93	90	*0	80	95	85	84	92	85	91	• 1	91	9.5	90
100	**	94	97	•7	101	100	94	101	101	**	90	40		95				-	101
O#0 00	87	63	8.5	64	86	89	<b>91</b>	89	84		05		86	05				0.7	07
391400	15.	NE 1	H. AN	ILLES		68	10	.1	0.5	71	12	71	71	71	70	40	68	48	. 5
50	90	74	10	7.	77	61	62	61	80	8.3	62	• 5	0.5	84	. 3	41	8.3	. 5	
15	82	82	12	62	0.5	40	85	95	64	85	.5	••		• 7	**		50	84	**
85 95	87	83	81	87	67	65	70	91	90	90	80	91	47 90	*1	10		91	• 1	91
00	91	.7	91	91	90	91	96	90	96	94	94	45	95	76	**	92	**	**	**
10m+++	8.	8 3	64	8.	86	46	66	85	**			•		•		••			•••
CADEAU	. 504	NCE 10	11.	•	21	22	11	21	•	37	•2	3.3	1.5	29	22	19	19	19	•
50	.1	.2		4.1	40	50	59	50	4.6	45			67	0.5	57		50	9.5	55
75 85	51	52	53	52	61	62	71	6.5	59	72 76	60	62	-0	70	45	55	72	75	67 73
95	60	58		65	70	75	60	78	70			•0		. 07	77		0.5	68	
190		94	79	50	56	63	95	05	50	10 l	101	102	102	100	66	55	100	102	102
D510%		. U.	5. A		-871														
0	-17	-15	-18	-10	-4	11	11	-6	-16	41	50		•1	34	25	-2	-5	-2	-10
50	33	20	29	50	50	57	58	•1	50	67	72	72	70	7.5	65	50	55	62	51
85	.5	43	**	47	55	62	70	67	61	7.9	45	82	. 2	77	67	<b>6</b> 1	70	0.3	67
95	58	55	55	50		89	97	97	75	100	104	101	104	102	76	70	102	100	104
100	.0	17	57	30	86	55		55	47	76	•0	70	76	7.3	. 5	52	42	70	56
BASILE	A. 04	AZIL																	
0	57	59	58	57	59	59	5.5	5.1	5.5	• 9	50	51	•	5.3	75	57	5.5	70	71
50 75	13	76	76	73	78	73	70	12	75	73	71	75	72	12	78	70	73	76	77
85	80	60	60	80	00	10	77	80	81	75	1.	15	75	80	61	81	61	70	00
95	85	95	93	95	95	93	91	86	95	80	80	81	81	84	97	95	97	**	07 07
ADM	81	8.3	83	45	8.3	42	79	81	85	77	11	19	78	83		0.3	0.3	-0	01
84158A4	E. 41	STHA	LIA															-	100
0	56	59	58	56	52	70	41	70	73	57	36	61	80	41	70	73	70	36 65	50
50	82	4.5	82	9.5	80	11	71	77	82	86		67	6.6	12	11	80	17	73	70
85	85	86	155	86	8.5	80	74	81	86	70	67	70	70	76	81	92	91	70	85 93
95	106	110	106	110	99	86	90	88	110	77 89	74	11	89	95	101	106	104	104	110
ADM	85	85	85	85	82	10	14	78	82	69	68	71	69	76	80	82	79	74	78
BROWNSV						6.3					100	1.2	72						
50	5.6	23	22	55	88	10	55	32	22 68	85	84	84	83	81	76	37	37	37 79	22
75	70	69	74	12	11	81	85	8.5	19	90	88	86	91	88	85	75	84	89	85
85	74	15	78 85	76	81	91	88	95	85 91	93	90	90	98	91	90	85	88 95	92 98	96
95	en.									7.									
95 100 ADM***	80 88 72	18	71	72	1 ;;	100	100	100	100	101	103	100	105	104	95	77	104	104	104

<sup>•1</sup>QT--FINST QUARTER DEC-JAN-FEB ••1MF--FIRST HALF YEAR DEC---MAY •••ADM--AVENAGE DAILY MAXIMUM PAGE 190

_	06	C J	N F	E8 10	7 0 T M	♦R 4	PO M	AA 50	T INF.		PUR G	IAEM		11.171			BEING	EXCEED	0
80 US	SELS.	-						41 20	I IMP	JU	M JU	L AU	G 30T	SE	P OC	7 NO1	V 407	SHE	ANN
0		5	8	0 0		14	24	29 10		5	6 40	0 61	- 44						
50	3			37 37			48	56 48		6				54				15	. 0
15				9 49			54	65 56			1 14	1 10		1 66				56	49
95	5			5 55				67 65		3				70	62			72	68
100	5			3 63				77 79		80				79		59	77	8.5	80
40M++		•	2 .	3 42				5 57		70				95				98	98
<b>BUCH</b>	eest.	60M	ANIA								•	•	""	67	58	47	57	66	57
0	-14	-1	- 1			6 2	2 1	2 6	-18	40				1		_			
50	32					2 9		1 52	41	70		73	72	29	13		. 0	0	-18
75					5			1 64	56	76		81	80	73	70		55	78	52
95	57							5 69	95	45	85	84	84	ii	7.5	58	74	114	70
100	69							5 80	76	9.5	95		95	85	81	69	84	96	89
					3			6 63	96	105		105	105	97		85	97	105	105
			_					,			84	84	84	7.	45	40	63	74	45
DUDAPE	-3	- /	-10	-10	1.														
50	15								-10	37	4.0		57	34	15		8		-10
15	. 5	54			5				56	68	15	70	70		55	42	55	61	52
85	47			47	51				42	76	78	81	78	7.1		51		74	47
95	55	50			45	1		0 78	74	89	87	87	95	75	67	54	49	70	74
00	60	59	64		76	8		90	₹0	105	101	102	101	85	87	62 75	80	90	84
0400	58	35	•0	5.0	51	•	7 7		50	76	82	81	80	173	41	47	95 61	103 70	103
UE 40 S				144									and Ex		-		3.		•0
0	39		•0		59				25	25	2.2	21	22	28	28		**		
50 75	72	7.	71		70				48		50	52	50	55	40	36	56	55	55
05	80	82	81	81	77				78	50	57	59	58	62	4.0	7.	40	55	61
15	*1	95	45	93	85				8.1	50	61		45		71	77	73	• •	72
90	102	10	103		**				45	**	70	15	15	76	7.	84	82	7.	
)#e e e	82	85	81	8.5	79				77	57	51	47	87	86		95		95	104
1160	w OR I H	. FE	. 64	-41.47				•		**	,,	40	58	**	4.0	74	70	44	71
0	47			66	67					88	4.9	49	66	4.0		4.0			
50 75	81	65	45	95	0.5	0 5			85	82	95	61	82	81	61	81	61	61	45
15	84	88	60	86	07	87			84		115	84	85	84	05	84	85	85	95
5	*0	97	+2	45	93	*5		89	88	67	87	88	87	86	86	84	87	47	86
00	95	98	11	**	95	¥5		98	92	*1	90	•0	•1	91		90	*1	*2	*2
Me e e	89	*0	v i	*0	92	¥1	*0	*1	*1	*7	90	59	97 V3	88	89	95		96	
160.	EGYP											-	10	96	• ▼	86	68	8+	•0
0	34	35	55	14	56	42		30	14	55	61	6.5	44					7.00	
0	4.0	54	59	61		79	77	70	44	95	8.5	81	65	58	51	.5	. 2	+5	34
5	"	95	45	48	71	74	85	80	15		89	9.5	90	19	74	**	7.	78	15
5	79		4.9	15	15		8.0	85	81	• 5	92	92	**	88	83	75	8.5		65
0	8.5	86	76	*0	85	**	100	97	94	102	**	98	101	74	95	67	76	105	**
	4.6	45	45	67	75	113	116	116	116	117	109	109	117	108	109	100	101	117	117
					,,	45	• 1	4.5	75	95		45	95	*0	84	78	85	₹0	8.5
CUTI	4. 1	4014					1.00												
0	47	46	15		50	61	45	50	• •	70	7.5	10	70	72	. 5	51	51	51	44
5	73	71	76	75	48	90	67	45	77	86	8.		86		82	74	00	45	79
5	15	74	41	70	91	*5	95	45	69	90	87	84	84	87			84	90	86
5			46	0.0	17	100	100	101	97	100	9.5	91	65		88			9.5	. 65
0	67		*8	₹8	104	137	108	100	100	111	98		111	45	•1		•1	151	100
	7.9	60	6	41	* 5	97	94	95	68	45	89	8+	*0	*0	••	45	86	111	111
GARY	. 41 8	-	CAN	404								-				. 4	99	89	**
	-45		-49	- 49	- 35	-14	12	- 35	-49	24	12	26	1						
)	19	1.5	17	16	24	40	50	36	21	20	15	28	59				- 51	- 51	-49
	34	54	15	12	40	55	50	55	**	44	70	80	66	61	45	5.0	•0		38
	40	14	50	50	44	50		45	54	49	74	12	72	86	54	*1	50	47	50
	25	61	51	51	50	70	7.	75	49	79	9.5	62	02	7.	70	58	75	74 85	80
•••	24	24	28	27	37	55	*0	*0	93		0.7	96	97	*0	85	71	90	•7	• 7
•••				-		,,	4.5	51	3.0	6.	75	1.	75	**	50	18	52	4.5	51
PECH	55			4.					4				- 1						
	73	75	51	73	25	58	. 5	25	51	6.0		67	44		6.5	56	56	56	51
	73	70	80	77	78	01	8 5	80	77	85	8.5	85	02	82	7.	7.	70	81	79
	80	80	82	81	66	90	66	91	74	. 7	87	86	87	85	81	81	84	67	
	85	85		87	+1	70	**	• 7	95	80	84	88	*0	87	85	8.5	84	89	
	• 5	45	95	95	98	106	104	104	106	101	97	95	05	*0	**	84	•1	95	96
•••	• 2	85	45	8.5	89	65			67	92	92	91	92	*0	87	#1 85	87	89	88
TO4 1	SLAN	D. PH		15.										-		M		Ø. 4	••
	71	74	75	71	13	75	71	71	71	73	12	71	71	13	75	7.			
	8.	65	86	84	84	80	85	84	44	85	85	85	85	85	84	74	73	71	71
	87	87	67	86	87	67	85	68	68	86	88	88	88	88	87	87	87	85 88	84
	91	65	91	89	86	86	89	8.0	89	89	90	89	90	89	88	88	8.	*0	87
	94	96	46	98	96	97	97	97	95	92	65	92	92	65	91	92	. 5	9.5	95
)	89	40	34	89	•0	90	91	90	90	91	91	95 91	96		96	98	98	98	98
		so.	6F810	.					100		200	42				70	40	91	90
ee. Elown	i, U.		41	41	42	58	31	51	51	29	28	31	,,						
E I Own	. 1		• •										28		54	40	53	28	28
E I Own	67	69	70	69	60	4.5	56	0.3		54		••							
E I Own	67	69	70	76	15	70	66	65	75	65	61		55		61	69	62	59	62
E I Own	61 75 78	69 76 79	70 77 81	76 80	79	70 74	70	15	75	65	61	95	62		68	76	70	59	62
EI Own	67	69	70	76	15	70	66	15	15	65	61	99	95	68 77				59	62

<sup>•1</sup>QT--FIRSF QUERFER DEC-JON-FEB ••1HF--FIRSF HALF YEAR DEC---MAY •••60M--AVERAGE DAILY MAXIMUM

PROB	06	с ,	AN	FEB	101•	1 44						701	011	CN P	KUBAB		ES D	NOT	BEING	EXCEED	ED
	CAS,	_	ZUEL		101 •	HA	H AP	R MA	20	T 1HF•	• ,	UN .	JUL	AUG	301	56	P 00	. No	W +0	ZHF	ANN
0		7	47	46	46		5 5	1 52		45	- 5				0.50						
50		8	00	07	67			i ři	r		1	70	70	70	52	1 5	3 5		1 5	51	45
75 R5			70	15	72	7		74		74	33	74	74	74	70	1 ;	; ;	0 6	9 70		69
95	7		12	#0	80	1	1	7.6	79	77	3	76	76	76	76	1 7	; ;	. ;	5 76		75
100			55	86	88	91	82	76 82	91	8.5		10	79	60	80		0 8	0 7	9 80	80	78
ADM• •			15	77	77	74		80	80	78	- 1	6	74 76 79 84 78	86	78	85			. 86	86	45 75 78 83 91 78
CARTA				A		1000										1		50	3 365	"	/*
50	8	4	2	82 68	66	67		68	67	66		9	70	69	69	60		1 70	0 68	2.0	2.0
75			6	65	88	86	**	85	84	83		5	85	86	85	80				45	
85	86	8		67	88	88	90	91	90	90		•	84	90	89	90	- 44			89	**
35	92		2	*1	92	92	95	**	95	94			71	92	91		90				91
AUM++	• 91			47 90	**	**	102	100	102	102	10	0 10	15	102	102	102	90		1 102	**	. 95
				40	40	91	92	92	9.5	*1		,	*		94	94	92	92	92	102	84 88 91 95 102 92
CAHUPA	ANG.	VENE			57			70.00	0221	3 7/855						100					8
50	7 8				ii	77	79	80	78	??		, ,	2	60	52	56			56	52	52
15	82			**	82	83	**	85		83				70	70	80		70	70	52 79	76
45	40				44	85		87		86			17	85	85	25	**	8.5	- 05	**	85
100	97				99	91	*1	98	92	91	71 84 84		2		92	*13	**	65			
A04+++					75	87	#3 #1 99	**	**	87	**			95	97	101	98	85 89 95	79 85 88 93 101	101	52 78 85 88 93
CALANI	ANCA	-	1000		~ 1			-						47	87				88		.7
0	37	51	1 1	5	**	35			35	31	**				220	200					
50	62	54		5	15	54				54	69	;		**	**	71	**	*0	*0	•0	51
0.5	65	6.5			2	70	**	10		-	75	1		40	79	78	?!	27	**	**	**
45	12	70				80	82	*	**	62	76		2			82	7.	71	70	82	70
100	60	61	6		ř	98	100	100	100	100	97	10		94	95	110	89	80	*1	92	90
ADM	45	0.1			•	41	69	13		47	76	.,		10	79	79	107	61 67 71 80 95	74 74 91 110 75	49 77 42 92 110	110
CHEROLI		UND.	HAB		- 1											-		0.400			12
50	73	73	,		ta di	**	5.5	51			42		,	10	62	65	54	**	40	**	22
15	19	80	,		2	75	00	**	13	**	71			6.5	70	82	re	74	70	70	7.
85	81	62	- 7		i		82	85	**	**	/*			10	82	85			**		
95		64		2 .	•					**	- 43	**		90	64			8.5	67		
100 A0M	85	65	,		:	77	*:	92	92	92	76 83	94		*	**	92	86 89 92 85	61 63 80 81	90	*1	**
				×	-	4.5	7.	**	**	70	67	**			88	86	85	*1	92	**	**
CHICAGE	-12	-15	J. S			-1	10	50	-1	- 14		n 50									
50	26	25	2		,	31	**	50	**	-15	87	75		5	35	34	20	-2	-2	-2	-15
75	10	15	5			**	50	**	62	51	78				81	74	**	50 55	55	**	50
45	52	51	34			*	+0			58	82	85		13	85	78	.,	30	**	**	**
100	45	67				62	**	70	70	12		45			*5		*;	**		**	- 22
ADMess	33	3 3	53			*>	58	70	57	**	104	101	10		85	101	::		101	100	104
CH1105E	. JAI	PAN										-					••	**	*3	75	50
0	-11	-17	- 19					24	-9	-10	12				52	50	24		1.21	1127	2022
75	25	5A	51			2#	•2	51	+0	51	60	67	,		55	61	50 50 50		**		-10
45	34	33	33			37	31	36	52	**	67	73		, ,			30	*5	-0	30	**
95	· A	41	.1			50	**	62	67	31	70	"	- 6		"	12	59		**	57 60 74	**
100 400	54	52	**	54		62	"	80	86	84	**	70			15	/*	**	38 45 57 70	**		70
	5.5	5.6	51	11	1.5	56	51	61	**	40	69	15	71			71		**	50	.7	40 70 70
CHITTAGO	NG.	PART	STAN																(50)	3.7	••
50	66	45	71	45		11	50	**	51	*5	**		7.			**	62	52	52	52	
75	75	75	77	75			:;	82	87	<i>'</i> *	62	82			12	82	*0	75	70	80	**
85	7.6	15	10	75				00	90	82	80	87			5	**		*0	87	**	85
95	41	41	*5		1.3	*2	**	42	95	92	92	90	81		2	**	#0	80 82 87	**		77 85 88
OH	79	79	93	#5	-113	**	02		0.7	102	**	**	9.5			95	**	93	*5	**	102
HICESTCH					10	50	77	77		**	.,	86	66		•	87	**		66	**	-
0	5.5	34	35	LAND	۱,	50	24	21	21	21	***					2027					
	60	95	61	61	9	8	61	**	35	57	**	41	51			23	24	31	23	55	21
	67	75	68	69		14		55	45	4.7		**	50		•	**	53 61 65 76	2.	61	**	52
95	79	82	72 80	82		7	11	50	75	21	52	51	55	5	2	59	45		**	A1	•2
	92	96	94	96		0	82		90	**	94	10	70		•	50	7.	57 68 76 90	75	56 61 72 90	78
OH	69	70	69	69			62		41	05	51	50	52		,	57	68	**	62	50	21 52 62 66 78 96
HUNG KI	4G. (	HINA																		30	
	51 51	45	50	29					57	29	50	59	62	50		57	46	41	41	4. 4	22
	56	50	50	54					00	57	19	85	86				66	57	67	41 75	29
45	58	52	59	58					14 19	66 71	84	91	92			82	12	62	74	84	76
	64	58	07	66					99	0.5	95	101	102	100		85	75	65	78	88	81
	55	49	79 55	55	10					104	105	110	iii	111			94	12	88	97 111	93
				"	•	5	7.5	80	7 5	65	85	9 5	45	91			71	61	71	61	111 72
HURCHILE 0 -	L. MA 47 -	N110	84. -52	CANAC	-5	,	24				_										
50	-9 -	- 17	-17	-14					52 ·	-57 -1	15	22	25	13						-55	-57
75 85		-6	-0	- 5		6	22	61 2	29	16	51	55	61	60			30 41	10	27	59	19
45	17	15	12	17	1 2				18	25	56	69	65	66	•	56	46	28	54	67	36 47
00	54	19	54	19	II •	1	64	87 (	37	87	68 88	79	75	96		67	56	57	67	61	67
OM••• .	-2 -	- 10	-9	-7	1				19		50	64	61	58			69 35	16	84	96	96
+107													٠.	-				. 0	15	46	26

<sup>•10</sup>T--FIRST QUARTER DEC-JAN-FEB •1HF--FIRST HALF YEAR DEC---MAY ••ADM--AVERAGE DAILY MAXIMUH PAGE 192

	2.5														_				
PROB	0E				MAR	APR	MAY	201	IHF	JUN	JUL	AUG	SQT	SEP	OCT	NOV	40T	2HF	ANN
CIUOA	0 OE			MEX.															
50	is				78		83		51	49				. 68	65			56	51
75	76				84		88	87	84	85 87	83			82	19			81	79
85	80	90			86		91	91	81	89	89	86		85	83		84	87	86
45	81				91	96	94	91	95	94	92	95		90	85		86	89	89
100	92				98		104	106	106	103	91	100	103	1 00	94	91	94	103	106
AOMee	82	81	. 81	6.5	89	92	94	92	87	92	92	91	42	40	87	85	87	89	
CLEVEL	AND.	0410		S					42										
50	31	29	-8		57	19	29	-5	-9	38	4.6		38	32	25	7	7		-9
15	61	30	38		18	50	59	51	50	69	14	12	12	66	54	42	50	65	51
85			45		53	40	71	36	51	77	81	10	80	74	62	51		76	45
95	55	55	5.5		65	71	79	ii	ii		92	85	62	18	47	56	72	81	72
100	69	75	69		85	84	92	92	92	101	105	102	103	101	40	88	101	103	103
AOMese	937	36	36	57	45	57	70	57	41	80	05	0.5	03	74		44	43	73	40
cocos	1 SLA	10. 11	NATON 69	DCEAN	71	70	71		124		111175	0.700							
50	81	82	45	02	62	82	í.	70	81		74	10	49	49	4.	10	44	-	48
15	84		85	85	85	85			85	•2	02		14	82	85	• 1	80	70	80
05	85		41	84	86				84	0.5	83	45	0.5	8.5		85	85	02	-
45		84	84	4.4	88	83			89	84	05	05	84	86		07	87	• 7	85
100	85	86	45	95	91	•	40	**		40		84	40	90	90		•1	ěi	**
				-		05	••	85	84	. 5	95	. 5	03	0.5		85		0.5	84
COLO .	. v.	LASE	-9	-9						1501			No	1					
50	10	29	28	20	30	50	40	-7	52	20	50	55	3.0	30	2.5			•	•
15	50	37	57	50	58	42	.5		61	51	50	52	55	4.0	41	35	*1	45	10
85	• 1	10	.0	40	- 61	45	.1	48	15	5.5	50	•0	50	52	**	41	52	54	50
95	• •		45	45	67	51	5.5	50	5.5	54	61	47	44	50	54		56	67	55
DM+++	30	30	50	50	50	40	62	42	62		70	78	70			50		70	7.0
				55	54	54	••	5.0	34	50	54	56	50	52	45	14	45	44	4.5
OL OGME	. ;	-5	ANY	- 5	15	34				T Terrary			100						
50	14	50	18	37	45	50	50	50	-5	65	**	45	•0	59	27	10	10	10	- 5
15		45	.1	.1	51	50	45	60	50		71	10	71	45	51	4.3	51	58	51
45		. 5	51	50	54	69	69	65	42	12	75	10	75	49	41	51	41	74	**
90	5.5	55	37	57	41		76	76	76	80	8 5		. 5	7.	44	41	75	0.5	• 1
DH	42	-0	• 5	62	12	57	*5	57	**	71	73	72	72		80	44			**
01.0460		TL 04		1.0				•	-	•		. 2	• •	**	57		57		51
0	. 5	50		50		70			50	12	71	71	,.				2		-
50	70	7.0	60	79		62	45	62	40	41	ái	01	71	71		76	44	66	56
75	42		9.			45		84	85		. 3	4.5			8.5	62	00	01	00
85		64	66	84	67	66	. 7		41		86		84			**	05	85	**
95 00	• /	84	90	70	*1			41	91			46	86		84	86	47	10	91
0#***	45			76	96	42	**	44	07	85	86	**	40	89		90	63	90	**
0-1									••	-	45	45	45	85	85	85	85	05	44
OWARRY		64	45	45		44	44	44	44	44			100	100					
50	61	00	41	ai l	41	42	42	e2	65	45	10	•	*5	• •				44	
15	85		35	45		05	46	05	05	4.5	60	11	70	76	80	01	00	7.	•0
95	44		44	-		48		47	47	85	02	*1	43	62	85	85	85	0.5	**
95 00	4 S		10	40	*3	*0	91		41		85	. 5	67			88	•••	**	40
30		**	**	44	**	95	*5	**	66	4.5		07	42	90	41	41	41	42	44
				5.55	-4	40	••	**	47	9.6	45	4.5	*	85		10		85	
PE 444(	SE N.	DENTE	- 5	-5															
0	55	51	52	33	50	21	50		- 5	50	42	40	57	20	24	1.5	15	1.5	- 5
5	42	59	.0	41	.2	51	50	52	**	65	70	62	61	56		34	••	50	
15	45	• 1	42		45	55	42	51	55		75	71	71	66	57	47	57	45	54
5	• •	45	• •	**	52	65	70			70		70	70	73	44	51	10	**	75
0	55	50	50	55	62	62	62	62	82	68	41	4.5	41		10	54		•1	41
			30	37	•1	50	•1	51	••	47	12	••	44	6.5	55	4.5	55	61	52
40054	50	ENTIN	A 58				••		7007										
0	75	15	7.5	30	55	51	20	20	20	17	15	10	1.5	21	50	34	21	1.5	13
5	0.2	85	82	85	79	6.5	51	74	68	51	52	55	52	54		66	44	50	45
5	84	86	67	88	83	75	70	18	60	65	67		65		13	70	15	70	70
5	95			98	90	0.5	7.	67	76	76	76	80	80		76	0.5	80	75	82
			111	114			92		116	84	95	98	98			105	90	105	114
	86	48	86	•7	0.2	15	6.0	15	61	-	65	69	66	13	11	82	11	12	76
MANO.	VENE.																		
	47	47	**	**	45	51	52	45	45	55	52	55	52	53	54	51	51	51	45
5	75	70	67	67	44	"	71	70	6R	70	70	70	10	71	10	44	10	10	66
5	13	12	76	12	11	76	76 78	76	74	76	14	10	14	15	14	15	14	14	15
5	18	11	40	80	85	82	82	60	83	80	16	76	70	"	76	75	16	76	78
0	8 5	85	69	88	91	89	89	91	91	86		#0 86	80	80	80	74 64	80	86	91
Mo o o	78	15	11	77	79	61	80	80	78	78	78	19	78	80	19	11	19	14	78
RACAO.	NES	HERLA	ND AN	IILLES	0.000														. 201
0	80	68 79	79	19	65	66	10	6.5	65	71	12		71	71	10	68	68	68	65
	82	82	82	82	85	81	82	81	90	83	82		83	84	85	81	83	83	81
	64	85	84	84	84	85	80	87	86	18	85	86	86	18	86	84	86	86	86
	87	85	81	87	81	88	90	91	90	90	89	91	18	91	88	86	91	88	87
5							140						- 1						
0	91	85	91	84	90	91	86	85	84	87	87	95	95	96	94	92	96	96	96

<sup>•10</sup>T--FIRST QUARTER DEC-JAN-FEB ••1MF--FIRST MALF YEAR DEC---MAY •••ADM--AYERAGE DAILY MOXIMUM

SIMEACE MILITARILITY TEMPERATURE	IN DECREES F	CAMUENMEST END	CAVEN DROMANTIATIES	DE NOT METNG EXCEEDED

PHDB	0EC	JAN	FEB	101 -	MeR	<b>OPH</b>	HOY	20T	IHF	JUN	JUL	♦UG	301	SEP	DC T	NOV	4QT	2HF	MY
CURITIE	1A. H	IRAZ11			<del>                                     </del>		-					-		1					
0	58	59	60	56	60	56	50	50	50	41	44	44	• 1	47	51	55	4/	4.1	41
10	16	/H	74	78 A 5	87	80	71	41	76	6R 75	77 84	61	71	76	71	74	71 76	71 79	75 87
65	115	87	86	87	85	85	80		86	76	87	11	81	19	80	85	42	85	86
100	104	107	102	107	104	104	87	104	107	85	91	45	89	105	104	107	104	104	107
AOM	43	84	45	74	85	81	11	HO	12	15	74	15	14	75	76	79	11	15	79
UACCA.	P651	STAN																	
U	4.9	45	-	44	51	.7	516	51		61	10	/1	61	10	65	54	54	54	4.4
75	75	67	71	68	19	85	80	87	85	84 88	86	84	44	84	66	75	40	H7	78 87
85	75	15	-0	78	87	41	42	4.5	87	89		44	89	84	81	45	44	40	90
95	80	00	46	84	76	٧/	46	9A	24	98	*1	21	93	95	V1	4/	95	40	105
100 A04	41	80	43	40	107	105	101	91	105	8.0	44	96	88	84	**	84	87	88	86
DASSE.	SENE	GAL																	
0	15	30	>8	55	59	61	61	50	55	65			65	64	10				55
75	10	17	12	/? /A	/1	75	61	75	75	81	45	67	#1 #6	86	# 5		46	81	77
45	87	40	13	ei	80	40	8.5	82	4.5	61	84	07	48	88	84	80	46	-	88
*>	41	04	4/	44	40	46	4.5	45	95	97	97	47	25	7.5	95	91	95	V 5	107
100	41	107	100	107	107	101	100	104	41	100	44	24	100	100	101	44	101	101	- 04
DALLAS.	11 4.	U.	3. A	. ,	11	51	50	11	2	55	6.1	61	55	50	10	1.7	17	1.7	- 2
>0	40		50	• 8	31		1.		51	67	6.6		46	79		50	48	16	
45	94	16	00	59	10	15	43	44	10	92	97	47	95	#0 V2	10	65	45	44	61
43	75	15	15	15	45	40	V1	91	40	91	101	161	102	96		7 8		102	44
190	34	46	60	98	46	11	40	10	07	105	111	109	111	105	90		195	111	111
			-			•		0.0	T.				• • •			-	111		-
O SCU	3. 3.	21	25	21	24	5.5	**	24	21	40	95	35	•#	50	• 2	24	28	28	21
50			• 6	.1	54	6.2	10	. 7	54	7.0	6.0	00	10	10	-	31	. 7	15	
15	31	51	00	55	00	10	7 P	15	69	0.5	90	42	e/	43	11		41	40	75 01
95	67	-0	10		/1	67	48	45	41		91	100	100	97	-	15		99	25
100	30	35	57	33	05	15	101	101	101	102	100	115	115 V5	102	e 1	60	102	115	115
									• •			• •						•	
0	67	MALIA		66	60		•0	•0	•0	50	50	56	50	5.5				50	50
50	45		42.00	-		-	0.7			70	11	et ()	7.	8 5	45		45	e I	45
15	40	44	10	90	90	49	66		42	61	63	10	44	90	47	90	*0	40	9.5
*5	40	**	14	V5	25		V5	41	41	47	*0	47	43	25	*1	41	70	91	47
	192	100	101	102	107	104	102	104	10+		94	VB	**	102	165	105	105	105	105
10	37	40	₩0	01	V I	47	• 1	•1		64	41	4.9	44	91	• 5	94	95	90	91
(446 4'	-11	-2. U.	- 50	- 10	-11		22	-11	- 50	\$0	. 5	61	50	24	4	-8	-0	-6	- 10
50	32	24	17	51	30		30	. 1	50	0.0	11	71	10	0.5	52	54	51	.1	50
15	• \$	42	.1	45	50	54	**	A 1	36	14	e1	14	<b>e</b> 0	12	62	51	0.5	10	75
45	34	50	52	51	95	67	10	40	6.5	¥0	92	e 5	# V S	76	10	30	41	43	#8
100	1.	13	10	7.	#3	4	9.6		40	104	10 •	101	104	*5	9.5	14	95	104	194
0=		• 3	•5	**	51	61		60	57		. 7	42	**	"	**	5.5	45	15	• 5
14011			. 5.	A .		LL.	4.0			14			Set		24	,	,	,	-10
>0	50	20	-16	-16	55	14	30	- 1	-16	94	15	71	71	57	25	-0	52	.7	- 10
15	10	50	5-	Şei		55	Ate	20	51	16		14	14	75	61			15	65
45	51	51	> 5	5.5	0.5	60	10	10	57	40	07	40	42	80	63	34	10	71	17
100		01		66	47	0.7	. 5	9.5	V.S	10+	105	101	105	100	4.4	41	100	105	105
0=	50	5 5	10	16	• 5	30	64	36	45	78		6.1	*1	1.	67	41	61	71	34
-	. SAL	JO 1 A5	APIA	1.22														4-	· .
>0		0.5	43	61	51	77	60	11	70	89	15	75	70	71	6.5	10	67	4/	70
15	-	64	70	79	14	es \$	¥0		7 m	**	97	w/	47	25	48	40	44	**	84
45	71	11	14	73	11	46	95	8.0	6.5	102	44	100	105	103	45	45	100	104	101
00	11	76	41	41	45	105	104	100	108	102	112	105	105	102	105	47	112	115	113
0	6/		10	65	15	15 %	43	44	76	44		100	48	30	90	45		96	45
	A. 15	NDON1 5	14	1															
0			45	• 1	-0	6	70		67	• /	80	67	67	91	63	80	41	40	10
50	# S	45	45	45	60	41	61	84	40	64	65	40	80	85	84	65	84	84	44
45	-	8 5	4 5	44	44	de	85	45	45	65	65	45	85	87	96	45	66	46	66
100	4.5	4.5	41	48	47	40	95		96	95	48	44	94	90	90	84	98	41	91
ADM	45	44	44	44	40	41	01	87	15	87	4.6	41	47	88	87	86	87	81	80
00на. 5	AUGI	ABAB	I A											i					
a		4.1	45	4.1	51	55	66	51	41	70	15	15	10	71	66	58	58	56	5.1
15							90	44	16	94	97	77	97	75	45	80	89	44	88
65	71	11	10	75	11	de	. 1	44	85	91	99	100	44	96	89	85	92	97	47
													105	102	101	97	112	104	101
DM	67	61	10	64	15	44	92	84	16	76	99	100	78	96	90	87	89	94	45
0 /5 /5 /5 /5	86 11 11 HB	01 04 /1 /0	65 70 74 41	64 70 7 5 8 1 9 4	14 11 H4 25	46 46 75	65 90 93 99 108	11 45 46 401	70 76 85 92 108	49 94 97 102 111	97 97 104 112	95 97 100 105 113	97 97 105 113	#9 75 76 107 112	45 87 89 75	76 80 85 88 97	#7 #9 97 100 117	10 11	7

THE BOEING COMPANY

NU. D6-/1/

PHOB	DEC	MAL	Ftd	197•	MAH	APR	MAY	201	1 HF • •	JŲN	JUL	<b>⊕</b> UG	SQT	SEP	OC T	NOY	104	2HF	●N¹
DUKRON			FHICA																
50	73	5/	50	>6	56	51	44	44 44	44	4.1	19	9.1	54	40	50	51	46	39	5
75	- 77	40	75	76	76	71	66	70	12	63	6.	54	6.5	66	69	/ !	69	66	61
45	14	62	81	41	60	*0	72	81	85	72	72	70	13	75	73	"	14	74	7
95	64	40	44	66		87	# 3	66	44	79	80	79	80	88	40	89	90	78 89	42
00	90	45	43	45	90	99	45	99	99	40	92	49	92	107	61	102	107	107	107
Mooo	74	61	81	40	40	18	75	78	19	75	72	13	15	75	15	77	15	74	16
USSELO O	ORF.	W. G	EHMAN	Y - 5	15	26	31	15	-4	<b>6</b> 0	46	45	40	56	21	10	10		
50	14	50	34	5/	45	50	58	50	44	6.5	66	65	66	54	ŝi	43	51	54	-1 51
75 85	45	45	• /	• 7	51	56	65	60	56	69	11	70	7.1	65	54	51	61	69	64
45	35	55	31	50	61	60	69	65	62	72	75	16	15	64	61	54	66	10	67
00	60	54	00	66	13	41	91	95	95	65 80	46	91	96	60	60	61	75	96	81
94	• >	•0	4.5	45	••	51	00	51	49	71	15	12	12	66	51	41	57	04	57
AST LO	1004	U. 5	50. AI	H1C4	5.5	45	•0	40	•0	59	51	50	5/	4.5	41	44	4.5		
50 75	15	71	11	10	70	01	71	67	68	61	60	61		65	65		45	65	57
45	16	77	40	77	711	76	14	11	40	10	10	64	72	70	71	15	15	71	14
45	4 5	83	31	M6	*	19 5	45	Re	47	11	14	62	45	no.	45	46	47	01	78
)( )****	10	71	**	49	*		95	95	30	49	42	44	74	106	101	98	106	106	100
	15	"	1 8	"	"	74	15	15	76	/0	70	10	/0	71	71	7 5	12	71	75
0 100	N. AL	-5/	-57	-57	0	-15	10	- • 0	-51	25	2 .	24	26	١	- 15				
G	12	#1	1.1	10	23	.0	25	Se.	24	58	01	00	60	51	-15	- 66	50	-44	-57
5	21	25	50	11	30	55	62	5/	**	6/	15	64	64	61	50	40	51	10	50
Ś		•1		45	37	13	711	11	70	15	10	43	76	75	70	•/	64	11	6/
0	16	57	0.2	62	12	₹0	40		94	49	¥12	40	99	90	05	10	70	44	41
****	20	17	21	19	5.5	51	0.4	• •	54	10	15	13	15	6.5	52	5 5	49	61	47
0	1 U a	52	LIGYA	52	5.5	• 1	. 1	5.5	12	54	54	34	54	54					
0	>>	5 5	35	50	54		11		59	76	In	10	11	76	70	05		75	52
5	61	50	61	01	0.0	/1	7 19	15	64	# 5	66.66	6.4	54	42	15	44	11	H2	76
>	/1	67	10	14	10	45	v1	14	/ S	45	AI	es 7	de	115	19	15	41	46	61
o	41	15	**	NV	77	101	100	100	104		104	104	100	105	101	90	105	104	45
40	65	0.5	65	-	04	15	* 5	10	70	87	HH	10	4n	80	NO	15	40	de	11
P-50.			5. A	-		9				-	./2								
0	. 5	-6	. 7	**	10	2H	12	1 n	50	50	61	60	50	75	12	16	16	16	
>	54	55	50	511	64	10	10	1.		84	47	45	68	45	75	52	70	72 45	19
	58	54	65	45	64	76	44	10	15	<b>V</b> 1	.0	40	91	es 7	"	45	01	90	#5
	15	13	71	71	10	45	45	40	48	44	41	94	VA	74	46	15	90	48	45
	51	>>	62	SH	68	11	85	11	94	107	107	105	107	67	78	9.5	105	107	107
11001.		404																	
	71	12	15	12	31	24	51	57	57	>8	54	30	50	51	31	SR	51	50	50
	15	70	10	16	12	13	14	12	17	/1	15	10	70	70	71 75	15	/1	70	71
5	10	10	7 m	7 m	10	16	15	10	74	15	16	15	15	10	70	77	15	15	15
	40	6.5	m \$	ns .	m \$	19	14	# 5	65	Z m	7 15	10	79	40	H O	42	41	42	45
	14	90	*0	#0	79	10	H 2	74	19	17	10	17	17	18	15	19	79	44	71
H16LE/		HA/1L													•				• • •
0	64 81	6H	40	64	44		68	68	6H	6/		10	61		10	11	44		••
	44	H1	40	H0	45	H0	44	45	40	41	80	41	61	41	61	AL	81	61	80
•	46	45		45	45		85	45	45	96	45	45	45	45	40	#6 65	65	50	54
	40	0/	H /	44	es H	47	ME	20 0	40	29 FR	98	16 44	49	90	4	94	40	vo	90
	13	41	41	40	40	71	11	**	46	45	41	47	47	67	95	45	47	45	85
	4 456		111960	1						17.							-	4.111	
	61	34		50	>0	0.5	0.0	56	20		0.6	20	20	611	6>			64	50
	7 A	10	41	81	95	10	40	14	7d	40	80	61	40	41	60	13	AO .	60	14
	H 5	42	42	85	64	44	45	no	45	H 5	# 5	40	85	45	46	45	44	46	84
>	10	45	db	Ho	AT	H-S		4	4	MH	41	44	44	70	49	44	46	40	91
	44	40	V1	44	41 85	40	W 5	40	46	40	¥0	44	94	96		42	96	96	46
LAUOI									.19		HO	""	10	MH	H /	40	A/	d?	40
	74	50	24	24	52	40	44	52	24	57	05	06	51	8 5		55	55	55	28
	70		64	64	10	7.	"	14	71	00	45	45	81	81	7 4	15	11	14	75
	41		7 <i>1</i>	41	45	45	80	115	#1 #5	86	46	44	90	86	65	91	47	49	46
	86	44	115	66	44	90	v 1	42	91	42	v2	75	76	75	44	87	95	41	45
	70	74	74	70	40	45	40	9 / H S	W/ MO	49		100	100	99	45	90	44	100	100
NKFUH					-			~,	-10	n.4	•0	¥1	**	74	46	81	85	67	64
)	0		-7		1.5	24	10	15	-1	•0	45	••	40	15	21	9	9	¥	-7
	13	5 5	57	35	42	50	54	50	42	65	66	65	64	59	50	41	50	57	50
	• 5			43	50	61	69	65	61	69	12	/1	71	66	5/	64	61	64	64
>	51	50	be	56	67	10	79	16	74	80	85	85	45	70	61	58	66	65	45
0	62	57	00	66	75	46	94	94	94		00		100	95	40	66	95	100	100
	19	57	42	19	40	58	67	58	49	72	75	14	74	67			, ,		

THE BOEING COMPONY THOMSPORT DIVISION NO. 06-7177 PAGE 195

SURFACE RELIGIBLITY TEMPERATURE IN DEGREES FAHRENHEIT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

PHOB	OEC	JAN	FLB	101•	MOR	<b>OPR</b>	MAY	20 T	HF.+	JUN	JUL	♦U6	501	SEP	100	NOV	401	2HF	ANN
FREETON			LEON		-														
0	62	67	61	62	70	/O 82	/0 81	10	62 8 I	69	44	61	18	H6 H1	94	98	68	67 78	40
50 75	80	80	65	40	82	85	84	85	86	47	60	14	81	80	41	47	81	81 83	84
85	88	86	40	91	86	47 71	45	A /	45	86	84	# I	45	94	47	85	86	de	71
100	91	92	16	46	92	44	10	98	98	85	44	66	40 81	85	43	96	90	90 84	46
AUM · ·	87	# 7	615	87	615	00	• •	00	0,1			••			-				
F40815H	-44	-47	-49	1., CA	N.	-24	-15	-45	-49	17	10	50	17	5	-6	- 12	-52	- 17	-49
50	- 5	-16	-15	-12	-0	15	34	21	-2 11	44	31	45	50	4.5	34	23	16	55	16
65	11	-0	1	•	10	19	14	21	16	4.11	67	55	54	51	54	34	49	54	54
130	21	11	15	17	33	41	50	56	56	71	10	14	16	51	45	-7	51	16	10
0****	2	-+	- 14	-5	- 1	1 %	5 1	16		4.5	5 5	50	40	+0	29	18	29	34	11
UNUDKA		44	14	22	76	54	• >	26	22	25	50		53	52	41	5.5	5.5	5.5	27
0	70	-1	. 3	44		5.15	05	51	51	12	14	-	"	80	65	56	65	60	*1
15	25	51	25	50	54	67	71	00	67	11	80	84	- 05	62	14	45	11	46	15
95	6.5	23	60	62	65	71	14	15	11	05	90	44	VI	117	41	41	94	*O	85
00	51	10	20	25	57	45	73	65	54	10	85	68	44	61	12	. 5	12	10	
ANDEM.		100																	
0	- %	- 5 1	-15	-15	-14		2.2	-14	-15	29	50	61	78	51	>2	14		51	- 55
10	12	27	17	20	25	51	50	10	14	52			67	60	50	-2	54	0.5	55
10.00	10	1.1	10	5.5	14	33	01	51	57	10	84	13	41	71	95	54	50	7.0	10
190	33	55	*0	33	50	71	14	10	24	91	90	=	46	44	7.6	. 1	55	54	24
	10	10	25	51	52	• 0	5.5	41	36	45	12		67	•1	51	•0	33		•
	101			•0	52	62	47	52	*0	05	12	/1	45	71	.0	50	50	16	•0
0	63	-0		0 4	#0	150	46	41	I to	37	41	45	69	45	81	7.1	14	6.5	79
15	7.0	10	73	15	w/ v0	**	100	96	90	101	71	49	97	90	44	11	16.0	45	**
45	14		67	45	10	105	104	107	100	136	103	15	105	9 %	**	95	101	104	10.5
00	44	10	41	75	107	111	100	100	47	101	110	162	117	91	¥0	46	40	44	70
CAFAT.	5-11	3	-1	-1	10	21	24	10	- 1	10	42	• 1	10	152	20	11	51	50	51
13	10	10	37	15	51	20	57	50	54	17	75	6.7	74	6.1	22		110		
45	.1		>0	40	33	.0	6.4	65	60	15	10	11	10	12	0.2	5.5	15	45	42
100	30	57	11	51	7.0	45	64	44	71 ##	46	101	47	101	71	10	71	VI	101	101
10	.0	30	• 1	41	51	54	0.0	50	••	7.5	11	7.0	75	94	34	. /	74	• 7	74
e 046t 1	ers.	84.	interes												70		• 9		-
50	01	1.	14	615	60	41	40	40	#O	00	13	01	40	45	47	41	45.5	<b>a</b> 5	43
15	42	47	02	67	42	4.3	45 8	4.5	45	85	65	et 5	44	66	44	65	70	85	65
45	46	41	43	45	86	44	84	44	40	40	40	46	48		49	44	44	44	9.4
100	40	49.40	44	40	64	45	40	40	*0	45	96	*0	90	97	01	40	44 .	40	45
	-	4.		00	27									1					
) needs 5	10	10-41	3.5	5.5	50	41	. 1	\$11	5.5	31	54	51	51	57	50	44		40	55
10	34	33	3.0	50	.0	0.5	67	01	50	17	70	11	90	-75	10	07	76	11	10
25	01	63	9.3	50	67	27	12	12	70	14	81	65	4.5	60	14		16	P2	215
100	15	61	15	15	7.5	12	41	14	# T	95	101	90	101	45	45	15	45	101	101
5044++	02	0.0	0.2	61	65	. 9	75	64	05	10	# \$		45	80	1.	41	14	14	71
61 4560 e	sc.	051.49	19																
0	12	0	5.1	90	1	10	51			20	33	35	74	25	17	19	10	5.5	
15	•0	41	• 9	4.0	10	52	54	50	5.5	4.5	- 65	65	65	6.1	96	5.0	56	67	57
45	-4	6.7	12	50	01	55	01	60	56	14	15	14	75	70	94	51	47	74	75
100	58	35	10	5.05	70	75	10	19	10	19.6	20	11.00	40	61	10	62	54	60	54
d()====	4.5	4.5		4.5	46	5.5	50	51	46	6.4	• 6	47	65	1	30	•	,-		,-
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50		0	-		10	215	4.1	20	16	25	62	58	31	5.5	515	25	50	62	12
15	14	16	70	15	31	54	55	51	11	58	71	64	10	50	50	11	55	64	51
45	55	23	10		•0	51	84	66	58	15	100	11	100	71	73	96	64	100	100
199 69#***	16	42	14	11	23	17	15 7	37	25	61	71	61	66	54	45	51	45	56	•0
0	51	51	13	51	511	65	60	5H 7A	51	64	60	44	99	81	69	19	62	61	19
75	7 B	41	81	45	62	62	8.5		# 5	45	85	153	#5	85	14 6	es \$	45	87	61
		4.5	3 5	25.46	114	44	65	#5	115	87	87	01	87	16	46	115	87		VI
43	90						69	154	30	40	91	₹1	71	90	40	40	91	31	
	90	87 73	42	96	9 5 86	44 44	44 67	94	40	40 40	90 90	41	71 77 70	90 96 89	46 84	46	46	91	9 /

OICI--FIRST QUARTER OEC-JAN-FER
OHFF-FIRST HALF YEAR DEC---MAY
OOAOM--AVERAGE DAILY MAXIMUM
PAGE 196

THE HOEING COMPANY TRANSPORT DIVISION

NO. 06-1171

h 7

PHUH	DEC	JAY	FLH	101 •	MAR	404	MA. V							-					
PTON	DE C	301	7	1010	744	APH	MAY	>01	IHF • •	JUN	JUL	AUG	SUI	SEP	100	NOV	401	2HF	ANN
GRI YAU			١.																
50	60	31	57		1 ::	60	57	54	54	60	52	60	52	36	61	61	56	52	52
15	82	41	81	42	11	19	40	76	!!	19	14	10	14	60	60	19	14	14	19
85	MA	# 5	64	154	85	45	87	H4	46	#4	#5	H 5	85	13.5	4	85	43	80	65
25	44	44	64	HV	VI	91	43	92	91	90	97	44	67	88	46	#5	84	88	66
100	41	46	45	41	100	91	VH	VV	**	77	¥7	95	31	101	9 1 9 4	84	101	74	V \$
4000 ·	00	45	86	Ro	87	es e3	60	15 m	41	67	61	41	47	84	66	87	88	101	101
																٠.	9.7		0,
GUAM.	5	PACI			100														
10	41	60	10	60	10	42	45	60	01	12	10	71	10	10	04	64	64	64	6/
15	4.5	42	62	45	6.5	14	42	81	H0	# 5 # 5	81	es 1	42	61	e 1	43	# 1	8.1	61
85	45		m \$	8.	81	85	61	46	110	6/	46	46	45	194	6.	84	64	45	4 6
15	15.44		**	41	47	48	V3	44	84	VO	88	el	8.4	87	45	66	85	66	110
100	15	40	4 3	45	40	12	9.	44	94	94	42	71	**	91	¥1	44	41	94	40
*****	42		46	44	65	4.	8.4	47	45	84	80	46	61	10	86	86	60	06	110
														140,000		-	7.7		
GUATEMA	414	117.	GUATE										10.09						
>0	0.4	01	0.0	61	61	10	52	41	61	25	51	52	51	54	50	40 40	44	**	• 1
13			71	70	15	10	11	10	61	71	15	10	70	10	6.15	66	6.11	00	6#
45	71	71	15	12	14	14	10	10	16	11	15	15	16	13	13	<b>/!</b>	15	15	15
8 h	10	11	14	14	01	45	es \$		42	et 5	10	11	60	7.4	18	15	15	11	"
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	11	7.5	" "	1.	et 1	20	es &	42	le.	61	10	10	19	12	10	14	16	76	10
																			• 6
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>0	60	01	11	4.5	00	64	03	6.4	0.	0.	03	67	65	51	60	61	51	51	31
15	65	10	2.0	79	0.0	113	11	74	10	14	1 4	16	16	11	"	1 11	11	11	IA
">	n 5		45	45	05	45	43	11.5	0.5	81	14	14	60	01	01	85	4.2	45	45
45	*3	44	46	90	64	44	*4	4.5	40	65	81	45	42	45	6.5	46		46	46
190	3.9	30		94	42	45	¥5	75	90	10	¥1	45	10	9.5	46	**	60	46	¥1
LUMBOR	44	(0.46	es #	6.5	pg sel	40	04	0.0	44	9/		110	60	0.7	65	46	44	**	Vit
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i heroria d		447.																	
>0	55	- 1	2	10	15	12	50	10	- 6	• 1	63	48	4.1	50	25		1	,	- 6
15	4.5	50	- 1	55	54	- 5	30	45	50	.0	0.5	0.1	91	21	40	40		55	41
85		. 2		07	95	25	61	55	31	6.5	6#	61	67	0.5	35	4.15	5 2	66	.00
95	SE	-	51	51	50	20	10	60	51	14	71	10	71	6/	24	51	0.5	/1	05
00	33	30	30	77	9.5	4.5	40	44	40	42	42	40	72	10	15	56	75	•0	10
	84	50	5 /	57	42	51	60	5.1		07	04	10	6.6	4.5	5.5	0.5	55	40	
												•			• •			•0	25
AVANA.				7.0															
0	51	20	30	50	5.5	55	50	5.5	50	6.5	0.0	6.0	0.0	01	0 5	55	55	>>	53
10	13	17	13	12	1.	"	10	//	14	61	45	07	0.2	62	7.0	15		40	11
45	63	10	11	10	10	45	15.0	47	но	45	40	66	80	N.S	. 5	40		00	
75	46		40	45	61	44	6.5		45	al	87	01	67	e 2	45	45	96	et et	00
20	0 4	01	71	91	w 1	16	74	3.	40	•0	90	49	71	40	4	66	40	45	<b>P1</b>
	10	10	10	14	9.1	40	40	4.6	41	90	3 5	42	46	-	**	91	-	46	10
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ELSINO.		91,490																	
		-25	-/1	-25	- 14	,		- 5 0	-25	5.1	46	5.7	51	20	5-	-6	-6	-6	-21
13	31	2.2	21	2.5	31	50	<b>9</b> 65	57	10	30	94	6.1	<b>=0</b>	50	4.1	54	42	51	4.5
45	50	52	13	5.5	5.0		55	50	. 5	0.5	10	0.7	64	51	.1	42	55	0.4	50
45	22	55	55	10	:/	20	94	>>		0.5	15		71	0.0	>0		51		62
90	.1	.1		.1	5.5	3/	11	11	61	05	10	15	14	44	54	· 15	05	70	14
0	5.1	21	23	24	52	6.3	55	9.5	50	65	71	0.0	67	10	90	50	16	44	4.0
											• •	9.0	•••	37	. >	57		36	
		046 .	094																
0	• 1	52	84	52	. 5	52	60	45	52	61	12	12	67	05	51				57
50	0.	60	28	6.1		/1	14	7.1		07	45	e \$	63	41	11	10	70	19	12
75	0.7	0.0		66	0.11	14	43	"	7.	65	85	64	66	45	02	15	6.5	01	62
75	11	10	07	10	71	18	64	<b>m</b> 0	"	0.7	67	07	<b>#</b> 65	47	-	14	85	#¥	115
90	42	10	13	16	16	44	91	91	0.5	V0	99	91	45	YO		61	VO	w 5	v 1
)H	0.4		0.5	05	.7	75	62	75	70	83	41	41	97	46	94	46	**	*/	91
										47	pr 4		A6	42	<b>E</b> 1	14	40	m 5	10
DAGE OF	U. HA	4411.	U. 5	. A.															
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15	16	"	10	11	16	"	11	10	14	60	#1	62	61	61	P 1	10	8.1	61	-0
45	10	7A	78	13	76	76	60	-0	00	61	45	e 5	45	# 5	45	40	# 5	4.5	62
00	85	He	44	65	81	41	0.5	9.5	6.5	64	42	00	85	42	85	45	46	00	45
	18	10	10	11	11	16	H0	67	87	66.61	H at	68 68	66	1818	40	66	40	40	40
						10	-0	14	"	01	87	4.5	95	4.5	03	60	45	45	49
00510N.	. 11.	. U.	5. A																
0	20	10	14	10	2.1	50		21	10	51	66	0.5	31	45	51	29	313	3.4	10
04	30	54	34	50	6 5	10	76		6.5	62	84	n.	H.S	40	13	63	71	21	10 70
			64	67	15	"	45	MO.	15	68	86	64	90	86	01	70	ei	100	H 5
15	6 11	66	15	71	"	10	45		19	90	91	43	42	90	64	13	45	43	44
<b>75</b>	10	16	HO	14	85	45	40	90	87		96	46	46	43	VO	110	VI	**	46
	41	4.3	¥0	VO	46	45	43	26	96				105	9.1	91	49	49	105	105
,	64	67	66		71	74	42	14	71	90	92	98	92	4.9	45	71	8.1	00	19
-	AD. 1	401A																	
0	46	47	52	46	60	61	61	60	46	64	61	61	64	64	.,			4.4	
	12	12	ii	74	44	87	92	44	81	86	60	80	62	80	51	74	11	19	46
>0	14	78	4.5	HO	44	75	94	95	AV	91	84	84	87	64	64	40	84	64	40
15			45	114	42		loi	98	95	94	86	40	91	Ro	86	42	67	v2	75
15	81	61																	
/ 5 9 5	#1 #6	# /	VI	90	911			104	101	101	91	40	78	90	91	97	92	100	
15	81			90	106	110	112	104 112 101	101 112 93	101 111 95	91 94 87		78 111 90						101

<sup>•1</sup>GT--FIRST QUARIEN DEC-JAN-FEB ••1HF--FIRST HALF YEAR DEC---MAY •••ADM--AJERAGE DAILY MAXIMUM

SURFACE RELIABILITY TEMPERATURE IN DEGREES FAMENHEIT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

PR08	OEC	JAN	FEA	191•	Her	4 APA	MAY	105	1HF••	NUL	JUL	AUG	301	SEP	OCT	NDV	401	2HF	<b>6</b> N
STANE	IUL;	URKEY 18	20	17	21	52	50	21	17	48	56			Τ	44	-			
50	46	41	42	45	40	55	61	5.5	4.0	69	13	14	12	68	61	25	25 61	25	1
75 85	55	50	51	50	33				57	15	10	79		74	61	60	10	74	6
5	62	56	58	40	1 36		80	14 14	62	78 86	81	87	81	78	70	65	75 85	80 89	7
0	70	66	64	70	82	95	94	95	95	99	100	100	100	100	85	11	100	100	10
M		45	47	48	52	61	66	60	54	"	41	81	80	15	67	59	67	13	6
DD4.	50	49	52	49	55	54	55	54	49	61	70	15	-67	70	68	65	63	63	•
0 5	83	81	75 80	75	16	81	92	80	78	92	84	90	86	91	84	81	84	86	8
5	85	0.5	45	84	85	90	95	90	89	95	96	96	91	94	91	89	92	96	9
5	89	97	45	89	101	104	100	108	108	103	101	101	105	99	96	95	98	104	104
M	86	4	44	85	45	91	95	90	87	97	99	94	98	96	95	91	94	96	92
HA 111	ESBUA 42	u.	50.	AFRICA 42	41	50	22	22	22	19	19	20	19	21		**			
0	48	60	68	68	65	61	55	60	6.	51	51	56	52	61	45	55	27	56	61
5	7	11	76	ii	1	71	63	15	15	5 R	61	64	60	72	75	14	13	12	71
5	45	85	82	0.5	40	"	71	19		48	67	13	70	78	42	84		61	8
D H•••	7.0	78	71	16	75	45	18	71	45	10	76	14	19	86	10	45	43	95	9 5
44510		AND.			•				. •	67	45	88	••	7.5	"	"	-74	70	12
	57	56	54 71	30	56 71	51	59	50	56	58	61	6.1	58	50	60	50	58	50	54
•	14	15	14	15	15	15	- 77	12	71	76	15	15	15	13	15	11	15	15	15
5	85	77	74	7.0	"	"	76	14	74	19	60	80	60	4.1	110	19	80	00	15
9	40	67	61	90	44	80	43	45	90	80	85	85	88	80	44	85	84	84	84
	14	78	70	78	18	78	83	19	70	41	62	43	95	42	85	41	45	95	40
Ю, ч	HERM	. 5	616	.,	50	51	6.2	50	• 5	42	42	61	. 1	42		51		4.	
)	13	71	15	15	75		87	8 5	"		00	78	80	79	61	77	31	51	70
	14	14	45	81	80	99	95	91	91	89		82	84	8.6	67	4.	84	87	64
,	40	91	44	95	40	105	102	102	100	45	91	84	95	**	90	87	97	90	101
•••	110 87	64	110	110	112	101	111	114	114	165	96	97	105 HV	100	104	108	108	108	114
545	CITY.	mg.,									125			1.7	16.7		•		**
	50	-15	15	-15	- 5	54	52	- 5	-15	15	54	79	70	56	24	5	5	5	-13
		41			54	00	14	49	50		84	67	67	40	40	54	56	8 5	75
	50	511	51	50	61	70	79	15	40	81	45	91	91	85	10	59	78		40
	10	15	14	74	84	91	105	104	105	100	112	115	100	10 4	85	49	91	100	115
•••	• 5	59	••	•3	54	6.0	15	65	5.5	45	91		9.3	61	70	54	48	78	66
	57	15TAN	• 5	10	41	51	.5	47	50	46	75	15	66	49	57	48	4.0		59
	60	44	4	AR	16	62	46	81	16	86	96		86	# 5	45	TA	40	45	79
	18	12	15	75	47	48	92	90	89	96	95	68	71	87	91	82	91	91	69
		61	4.	PA .	45	29	104	104	100	105	88	43	102	25	98	91	98	105	105
•••	91 40	11	74	79	85	111 40	45	116	110	114 V5	91	84	116	108	104	100	100	114	118
LAVI	. IC	LAND																	01
	56	52	5.1	55	15	15	45	50	10	52	50	34	52	21	10	10	10	10	
	• 1	34	50	• 0	4.1		51	41		54	51	51	57	52	**	41	46	33	50
	44	41	• 1	*2	50	52	5.5	50	54	56	45	54	54	50			52	58	54
	55	50	50	55	58	59	6.		6.	6.6	10	71	76	46	56	5.5	50	65	62
•••	SA	50	57	57	19	. 5	50	••	- 61	55	>4	51	57	51	44	39	45	51	**
CHIE	5 A	-4	y. '	-A -	•	12	25		- 0	24	54	54	20	24	21	10	10	10	- 6
	50	\$5	56	56	50		. 9		•0	55	50	54	57	50	.1	41	46	25	
	**	45	. 7	**	50	51	57	50	52	46	45	66	70	61	54	51	51		40
	5.5	50	> 5	55	54	42	15	13	12	19	11	11	40	71	6.5	57	69	80	66 7 H
•••	60 61	40	61	61	45	15	57	51	95	45	92	86	V6	41	55	05	40	¥6	96
Tour	. Su										LW.	1.00						1 1 2	**
	11	15	;;	11		55	61	**	41	67	65	64	64	61	62	55	55	55	41
	45	85	56	16	# S	41	45	9/	45	100	95	45	77	90	40	45	87 95	97	85
	64	66	40	HA.	45	101	10 5	101	96	105	94	45	100	94	40	43	98	100	100
				111	103	117	104	10H	117	116	117	101 109	107 118	105	105		105	108	10H 118
•••	*2	90	* 5		100	105	107	104	34		101	44	102	102	106		101	101	100
	45	. 50.	• 5	4.5	40	50	2.5	25	25	22	20	21	20	25	51	56	25	20	20
	15	76	76	76	71	65	31	64	10	51	51	50	>5	62	64	15	67	60	92
	85	89	41	84	/ H	15	68	16	81	62	5H	65	61	70	18	81	11	70	16
		95	V 5	94	84	# 5	76	86	95	70	63	16	75	14	81	91	81	75 85	90
	95			105	46	¥5	66	96	105	82									

<sup>•</sup> IQT--FIKST QUARTER DEC-JAN-FEU •• INF--FIRST HALF YEAH DEC---MAY ••• ADM--AVERAGE DAILY MAXIMUM PAGE 198

PRDS	DEC	JAN	FE6	101-	MAI	AP.	R MAI	7 291	145.00			VEN	PRUBAB	161111	F2 OF			EXCEEDE	
KINGS		JAHAI		1914	-	AP	HA	741	11# • •	JU	N JUL	AU	G 5Q T	SE	001	NDV	407	2 HF	ANN
0	3/			57	56	6.	66	58	57	61	8 66	- 61		1					
50	78	77	17	77	11	79	80		18	82				68				67 81	57 79
75	8.5			82	82				8.5	85	85	8	85	89		85		85	85
85	85			84	84				85	87		81	87	84	86	85	87	87	87
100	96	95		96	93				90	90				90				91	91
AOM		86		86	86				86	89				96		96	96	97	97
41 SUM		NYS													-	•			00
0	56	57	51	56	60	60			56	55	56	50	54	54	55	55	54	54	54
50	74	75	75	75	75	74	. /5	14	74	72	15	12		75		75	74	13	74
75	19	80	80	85	82	78	11	78	79	76		71	77	78	80	80	79	78	19
95	88	88	89	88	88	87	84	87	88	78	83	80	80	00		85	85		82
100			98	98	98	98	93	*8	98	89	*1	97	84	95	87	87	95	87	86
AOMee	- 84	85	84	84	8.5	85	• 1	65	0.5		80	81	00	85	05	05		92	85
4001AE	. AL	SEO.	U. S.	. A.														-	
0		-5	- 1	-5	- 5	10	<b>2</b> D	- 5	-5	54	40	40	54	32	24	•	•	•	-5
50 75	30	36	25	30	35	37	• 5	37	54	49	54	55	55	50	42	35	42		40
85	37	•0	42	58	45	4.5	5.5	52	44	54	50	•0	58	55	44	41	51	57	52
95	42	45	41	46	48	51	62	62	40	57	61	6.5	45	54	48	4.5	55	61	57
100	48	51	52	52	55	50	76	76	76	78	78	81		76	55	54	76	71	8.8
ADM	54	54	56	35	57	61	47	41	58	54	58	60	51	54	**	39	**	52	45
-	LUMPU	6. MA			ļ														
0		60		66	68	70			64	68	. 67		67	46			40	47	
50 75	81	61	65		0.5	8.5	. 5	A 5	82	65	81	62	02	95		- 61	• 1	**	82
45	84	65	86	86	86	80	86	86	66	86	85	65	85	85			85	85	86
95	*0	91	42	45	w2	* 1	**	92	92	91	9D	87		87	- 84		84	87	88
100	95	76	98	98	98	96	97	96	10	94	7.	96	91	*0	**	95	*0	•0	45
AOM		*0	45	♥D	45	91	91	91	91	91	*0	90	40	90	89		87	90	90
RUWAL T	. KUW	AI F																	12.01
0	50	35	50	5.5	•0	54	.0	40	5.5	72	7 3		68	67	51	4.5	4.5		
50	50	55	58	57	••	76	86	76	00		25	45	95	• • •	42	70	ei.	07	55
45	05	61	64	67	12	65	55		76	96		101	100	97		11	*0	**	
95	72	71	71	73	41	W2	101		92	104	102	104	105	130	91	80	. 95	101	. 5
100	7.9	. 85	76	82	96	10.5	109	109	109	119	118	115	109	107	105	100	117	109	104
ADM	05		45	64	15	6 5	94	6 5	75		103	104	102	100	*1	11		95	119
	EIN. I	-48544	bLL 15											520					17.5
0	72	72	12	12	7.5	75	75	7.5	12	75	12	71	71	73	75	75	13	71	•
50	1.5	61	• 1	78	82	45	6.5	65	60	8.5		85	0.5	0.5	0.5	0.5	0.5	43	71
45	73	85	85	60	85	85	05	8.	65	65	85	45	85	65	05	05	45	06	
¥5	80	84	87	65	87	47		86	8.5	86		90	87	96	.7		87	07	86
100	.0	40	*1	91		91	*0	*1	*i	*0	* 5	94	*0	95	40 45	90	*0	*0	
*0M***			45	85		46	87		86	0.7		46	88			47	*5	68	95 97
10605.	MIGE	110														-	-		•
0	6.6	0.5	66	6.5	60	69		60	•0	4.9		67	67	64		70			
50	45		8.5	42			45	85	0.2	80	7.0	7 0	79	7.0		82	80	79	60
75	60	87	41	87		67	66	88	86				82	92	0.5	85	0.5	8.5	84
95	92	*1	92	9.5	75	95	84	91	**	81	8.5	6 5		8.5	05			85	
100		95	46		**		10	10.	104	9.5	93	**	9.6	4.	70	*1	*1	•0	95
AOM				88		89			66	85	0.5	0.2	85	0.5	85		05	99	84
LAHORE.		STOR														11-51:			1.1
0	55	24	52	26	42	50		•2	20	44	49	67		4.5	••	57			••
50	57	55	50	54		79	66	10	67	93	90		90	85	77	45	57	45	2A 75
85	65	41	65	**	15	87	95	88	76		96	95	96			72	85	44	87
95	72	70	77	6 M	"	100	104	102	97	102	9.0	95	100	. 5	.7	74		98	45
100	62	70	*0		100	115	117	117	117	117	11.5	100	106	107	104	8.5		106	102
•D#•••	73	4.0	12	71	65	95	100		85	104	100	97	101	•7	95	0.5	107	107	117
LAJES.	ATORE	s														-			
0	50	56	59	56	•2	<b>61</b>	47	4.1	58	52	51	61	52	55	51				1.22
50	60	56	56	50	58	.0	62	40	59	67	11	7.5	70	71	67	48	47	40	30
75 85	65	6.5	62	6.5	95				64	71	74	76	75	15	70	**	71	7.	70
95	••	67	67	65	0.5		71	70	71	73	76	76	77	17	15	8.	14	76	13
100	71	70	70	71	70	73	76	76	76	10	07	85	81	01	7.	12	70	01	70
<b>404</b>		62	62	4.5	0.5		47	44	6.5	12	76	79	76	7.	65	77 67	71	75	••
LO PAZ.	80L1	VIA		- 1										-		-		-	
0	55	5 5	56	55	56	50	50	10	50	21	26	27	26	50	10	40	40	24	3.4
50	54	55	53	55	55	55	49	52	52	48	40		48	51	50	50	50	50	26 51
75 85	61	56	58	50	58	58	54	57	58	55	55	35	54	51	59	61	59	37	50
95	47	.,	66	\$1	60	61	57	60	67	56	56	57	57	60	62	45	65	41	45
100	74	"	76	77	16	15	72	76	77	10	42 71	63	72	80	16	17	80	48	
AOM	65	6.5	65	44	64	65	64		64	62	62	65	62	64	66	61	66	80	64
LAS PAL	MAS.	CAMAR	v 15.															25	
0	47	46	47	46	47	50	54	47	46	58	40	62	58	59	56	52	52	42	
50	66	64	65	65	65	66	68	60	65	10	72	15	72	74	73	70	72	52 72	69
85	71 75	71	71	70	70	71	12	15	71	74	76	79	11	78	78	15	78	78	75
95	78	77	10	78	78	80	79	74 #1	80	76	18	81	80	81	80	77	81	81	79
100	85	86	84	86	86	91	68	91	91	89	95	44	99	96	95	88	96	88	· 87
ADM	12	70	71	71	11	71	73	12	71	15	77	79	77	79	79	76	78	78	74
.101-	-FIRS	T 0116	OTEO :	DEC-JA	W_EE0											0.000			

<sup>\*19</sup>T\*-FIRST QUORTER DEC-JAN-FEB \*\*1HF--FIRST HALF YEAR DEC---MAY \*\*\*ADM--AVERAGE DOLLY MOXIMUM

SURFACE RELIABILITY TEMPERATURE IN DEGREES FAMRENMEIT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

PHO	ı Di	C	JAN	FEB	101	MAR	400	***				704	014			LITTE	S 0F	107	BEING	FXCEED	EO
	NGHA				.010	HAR	APR	MAY	201	IHF	J	UN .	JUL	AUG	sor	SEP	00/	NO	. 40	T 2HF	ANN
0	- 5		. 5 5		- 56	-25	-1	20	-25	-56		52	45	51	32		111				
50		2	18	26	19	26	58	50	38	28		59	64	60	91	51	41	31			-36
HS	5	8	52	52	35	37	55	58	55	45 52		10	10	66	80	51		59	5.5	64	57
100		5	54	57	41	56	62	12	71	66		7 69	19	**	12	61	55	42			
AUMo	•• 2		23	2	24	55	45	56	86	86			71	40	91	81	10	54	41	61	91
LEOP	DLUVI		MEA	CONC				19.61					• •	66	68	51	45	54	45	56	46
0	ŧ	5			65	64		64	64			•	58	56	انت	١	-				
50	8		1V 12	7 ·	18	80	80	80	80	19	,	•	15		58	70	59	62	59		58
85	81			05	85	80	80	85	84	83			16		79	82	84	83	85	81	/A
100	4		1)		80 97	VI	VO		90	40			11		81	84	80	85	90	84	05
A0#			7		87	89	46	88	97	97	•	5 9	0	V5 (	25	96	97	94	91	97	97
Links						186			•••	96	8		31	86	3	. 7	88	87	47	05	
0				HICA		6.5			65	0.5											
75	40				0	81	61	.0	81	80	7				2	10	14	67	**	62	62
45	He					85	87	47	87	85	# [	,		60 6	u	ěĬ	02	70	78	77 82	7÷
45	8.4		•		10	91	40	A 1	97	62	8 5			46 4 45 A	3	H S	* 5			84	
100 A0	97					89	95	99	69	99	95			45 6		92	92	95	95	46 V5	9.1
							94	68			85	•	5	84 .	•	85				45	**
LIMA.	7640	5		, ,		61	50														
50	70	-	•	15 1	5	15	72	57	52	52				56 .		51	55	>1	51		
55	10	6			8	76	10	71	10	**				5 6		0.5	65 6B	* 7	65		
45	40			1 H	0	86	84	13	79	•0					8	<b>6</b> 8		73	71	70	7.5
100	41	101	,	72 Y	2	¥ 8	.5		95	65	76	7		12 7		72 711	15	70	10	70	62
		e.	•	1 4	•	. 5	•0	14	14	80		6		6 6		6 H	79	65	71	65	75
LISHON	11																		•		. ,
50	52	51		3 5		55	56	4.2	50	39	• •	52		5 41		51	45	50	5.	36	24
15	31	50	5	8 5	9	6.1		64	50	65	75	71		7 7			0.5	57	. 5	67	61
45	62	51				71	.7	12	70		77	40		0 80		75	12	05	71	•0	70
190		0.0					1.	94	10	96	96					8.0	Te.	10		89	66
40****	51	50	5	# 5	'			6.6	65	61	15	101				76	**	42	94	105	103
LIVING		. 4.	Restri	DESIA									_					4.	••	74	•7
>0	12	0.1	3	6 50				51	57	57	21	52	3	6 21		•0	.,				10-
15	15	70						67	71	73	6.1					15	52	70	78	70	71
45	41	<b>#</b> 1	9	5 44			4.5	7 7	95	85	7.5	71	7						47		02
100	101	46 V3	41						84	92	40	77					•1	40	97	45	
A0****	87	45							0.7	101 05		17	Y	7 97	1	05 1	G5 1		105	105	105
LOVOON.	1.961	490									••	• • •	0.2	2 01		•0	44	<b>41</b>	42		80
0	la.	11	,	, ,		/1 2	5 2	7 15	21		44										
10	41	•0	• 0		1 9		4 9				40		59					25	2.5	25	•
15	46	**	>0						51	54	. 7	70	70	70				50	51	57	51
13	5 1	31	35	55	1.0	1 0			62 73	60 72	71	02	6.5				62	52		71	67
100 AUT+++	45	54	* 3			2 4			V I	41		95						**	73	62 99	00
		••	-,	• •	13	5	• •	. 5	57	51		7.5	12	71					58	•5	>0
3 455	ttes.	CAL	15.0			. 0.				4.1											
>0	50	5.1	50	54		1 5			50	25 57			51					56	54	54	25
15	62	0.1	6.1			5 6	> 6		1	66	70	75	7.	75					6.5	45	•1
25	15	75	75	10	,				71	71	16	7.	11	7.	1		5		12 11	76	71
00	40	40		61		7 .	0 9		;;	W1	100	W 5	44	100	10	9 8		0	89	90	69
	60	6.5	6.5			5 6		٠ .	1	••	12	1	15	74					00 72	73	106
004140		OUE S	-0																	••	• •
>3	11	79	12	10	1 ;				•	**		45		45		9 5		2		45	
15	45.5	-	46							10	12	66	0.6	67	7	1 /	5 1	5	7 5	70	75
45	47	**	26	44	8	5 50	(4)		>	48	15	72	11	73	1				0	10	0.1
00 1	112	10	10.5	112	10				2	12	. 5	. 5		85			> 1		15	#2 **	**
0	45	45	41	46	d				5	86	"	76	100 7H	100	11	. 11	5 11	2 1	14	114	114
GAYDA,	4 1661	A									- 111			•	"	0 4		3 .	12	79	45
0	67		10	01	10					••	56	50	50		1.						
15	F9	81	10 n 5	42	84		7	, ,	9	7.0	75	10	69	70					75	75	50
45	44	8 5	45	46	85					#3 #5	75	13	12	14	1.0	. 7	8 8	1 /	•	ii	81
00	44	46	49	44	81	88	8	9	0	90	02	79	77	16	1				1	80	0.5
	8 5	45	85	95	37				7	97		85	# 5	44	61				8	H/	89 VR
				-			0.4		•	••	"	76	14	75	1				7	iř	80
0	N. HP	SI	31	51	5	50	45			•5	40										
<b>5</b> 0	71	11	71	71	72	71	64		0	71	66	67	40	67					•	19	50
45	n	16	76	76 78	175				6	17	12	13	16	74	10	9 79			8	70	/0 /8
15	42		44	R S	8 5	82	82			/9 84	81	61	14	85	8	1 8	1 /	9 8	1	80	81
	91 90	41	91	81	95		84	9(	0	91	89	89	91	91					7	47 V5	87 95
							8 1	8	•	82	84	.5	46	85	8				6	85	84
•101	FIRSI	604	RIER	OEC-	JAN-F	Es															

<sup>\*</sup>ICI--FINSE CUARTER DEC-JAN-FEB \*\*INF--FINSE HALF YEAR DEC---MAY \*\*\*ADM--AVFRAGE DAILY MAXIMUN PAGE 200

i

THE BOEING COMPANY TRANSPORT DIVISION

NO. D6-/177

PROB	DEC	NAL	FtB	101+	MAR	APR	MAY	301	IHF • •	JUN	JUL	AUG	SUT	SEP	001	MOV	401	2HF	ANY
MADRA!	S. INC	14	54	51	62	64	10	62	51									59	57
50	ii	76	18	"	82	41	92	87	42	69 V 1	11	41	98	86	83	59 19	82	85	83
15	1.8	81	45	45	61	45	. 97	95	89	46	42	9 [	7.5	90	88	83	88	65	90
45 45	85	45	85 90	90	89	100	100	103	100	103	94	91	101	99	90	85	90	101	101
100	91	¥1	44	98	102	109	115	115	113	110	106	104	110	102	102	94	102	110	113
AUMeee	de	45	**	46	91	75	101	96	91	100	96	95	41	94	90	85	40	95	65
MADRIO					١,,	34			1.6								•		
50	42	40	45	42	25	24 54	61	25	14	69	15	14	12	67	50	25	25	25	14
15	4 6	.1	.9	49	55	01	64	62	51	16	aí	61	10	14	65	53	66	15	67
45	51	49	53	52	56	64	12	6/	62	19	85	44	84	11	68	56	70	14	75
100	50	55	10	70	16	12	91	76	75	87	101	102	102	85	75	62	96	102	102
AUMeee		.1	51		31		71	64	56	.0	01	de		ii	00	54	66	75	
MAKASS																			
50	14	70	40	14	10	60	63	60	6 S	65	10	65	62	58	65		58	19	50
15	62	8.1	112	42	45		4		65	0.5	42	45	45	85	80	60	19	4	64
45	4.5	92	el 5	45	6.5			85	65	4	0.5	4	4	46	45	45	80	46	de
100	69	42	45	45	45	91	91	91	8d	91	45	44	44	90	99	91	90	¥5	90
404		4.6	21.04	44	45	80	47	An	45			67	44	67	97	40	01	66	80
MAL 14.	PAL I																		
50	50	10	34	54	57		4.5	57	54	57	62	62	57	51	45	42	45	42	34
15	6.5	55	00	56	65	61	71	61	50	75	85	14	11	10	71	00	70	13	75
65	65	62	€ \$		66	10	14	15	70	d1		et F	-		<b>d</b> 0	11	41		19
100	15	10	10	10	72	76	H1	95	79	48	95	105	95	90	46	10	49	v 3	69
UMeee	62	24	29	60	62	00	71	20	0.5	70	104	45	05	81	15	45	100	105	105
ANAGU	A. Y10		) <b>A</b>																
0	66	65	6-	6.5	65		4.0		65	70	67	6.6	01	9.0	6 11	41	61	47	. 5
10	80	80	44	40	43	45	61	45	45	60	61	48	60	80	19	10	#5	#0 d 3	45
45	65	ds	46	110	41	84			81	85	50	65	de	85	4	46	85	45	67
100	44	4 5	10	VO	¥1	45	40	91	91	4.0	4.	6.4	00		4.6	44	40	49	91
0=	47	44	44	84	49	90	16	40	40	95	87	41	45	80	85	45	85	45	67
4 4405	. 844/	11																	
0	61	65	Ad	05	67	6.6	64	6 /	65	65		01	6.4	6.0	6.6	46		64	
75	45	00	43	62	45	81	45	41	62	43	45 .	8.5	42	44	de	8 4		16.5	45
45	44	4.0	01	44	67	do	01	0.7	86	47	44	97	e 7	90	90	47	*0	45	49
4.0	24	92	45	95	٧I	69	<b>▼</b> 0	91	9.5	¥1	91	25		74	94			94	
00	101	44	44	101	47	44	45	44	101	95	95	98	44	99	100	91	100	100	101
																• •	••		
ANGALO	65	401A	62	42	05	71		85	62			45 7	64	70	66		•>	65	62
50	40	0.0	6.1	60	61.5	45	85		42	40	10	14	14	12	et 1	0.1	90	40	61
75	110	40	45	47	MY	49	41	91	07	6.5	45	0.5	m 5	01		65		04	66
45	90	49	15	45	¥ 5	92		3.	4.5	45	85	41	44	45	47	10	90	45	83 V 5
D****	44	42	130	100	V#	40	9.0	V0	100	96	40	40				15	45	45	100
0		15.00	46	9.7	A0	¥1	91	91	40	#5	de	60	40	44	He	46		45	47
0	50 PH 1	LLIPI	465						1.0								75		100
50	74	50	00	78	61	65	04	61	40	05	01	61	42	6.4	41	40	41	41	59 61
15	42	45	= 5	11.5	46	44	45.49	69.00	mo	40	45	26%	46	45	65		85	86	46
45	44	44	40	90	45	19	40	VO	**	95	71	40	10	40	86	45	47	36	44
60		95	*6	46	W#	100	101	101	191	100	11	17	100	95	¥0	45	90	100	101
	46	40	11.19	09 P	¥1	9 4	91	11	WA	¥1	44.66	0.7	4 4	84	44.64	87	88	AM	
		. 4. / 0	114	-															
0	5.11	60	6.0	00	67	64	6.6	6/	46	69	70		64	6.6	6.6	10	64	64	
50	47	65	45	46	11.5	66	45		16	45	43	49	45	49	44	61	44	45	66
d'S	66	45	41	elet	etes	40	VI	80	40	¥1	91	48	71	45	*0	49	91	v1	91
60	15	42	91	64 A5	A4	102	100	25	**	V5	45	46	76	96	94	45	25	46	95
0	*1	¥0	•0	¥0	91	45	43	102	41	95	101	162	102	102	45	91	105	102	102
A4511L	1.5.	FHANC																	
0	11	14	,	v	20	24	52	20	•	41	41	47	<b>%1</b>	5.	21	21	21	21	
50	51	40	45	*/	47	20	56	51	49	62	64	15	61	12	01	50	90	00	50
45	62	56	58	59	54	60	65	59	60	13	14	45	15	65	15	67	10	45	10
95	6/	95	61	05		9.5	11	15	10	82	Ho	40	41	87	43	15	65	40	46
00	59	55	71	71	79	50	05	60	57	15	76	101	101	42	10	10	92	101	101
						-	D7.					43	. 0	""	. 0	41	. ,		67
0	62	-	OCEA	62	0.5	56	55	55	55	51	51	50	50	51	55	51	51	50	60
50	14	60	10	19	16	16	15	10	11	10	67	64	69	10	12	15	72	71	50
15	84	#4 #6	85	H 5	83	40	11	HO	45	14	15	15	15	14	16	19	7.6	16	40
75	8 7	4.5	41	46	46	45	81	86	85 Ay	10	11	11	15	16	18	81	80 85	78 83	86 43
00	25	¥5	<b>41</b>	45	70 H4	44	85	90	95	85	15	15	65	8 5	88	91	91	91	45
	65	He	45				19	82					15	11	60	8.3	40	78	81

<sup>•191--</sup>FIRST QUARTER DEC-JAN-FEH ••1HF~-FIRST HALF YEAR DEC---MAY •••ADM--AVERAGE DAILY MAXIMUM

SURFACE HELIABILITY TEMPERATURE IN DEGREES FORFEWHELL FOR GIVEN PROBABILITIES OF NOL BEING EXCEEDED

HUH	DEC	Jen	FEB	101	MAR	APR	MAY	701	IHF	JUN	JUL	AUG	501	SEP	0C T		401	EXCEEDE:	ANV
HAZATI	LAN,							2.1			5735		- 0.0				100		
34	70	5 5		57	55	5/		55	37	80	69	68		68	61	67	67	62	57
75	7 10	60	70	71	71	14	14	15	14	85	8 4	85	16.64	84	85	19	83	84	90
H5	15	71	12	13	13	16	85	81	10	84	86	86	86	85	84	80	84	86	82
00	4.2	"	14	67	62			47	47	91	91	95		40	49	85	87	93	41
OF		/1	/1	17	75	76	60	16	74	84	86	46	85	85	45	80	45	84	19
UAN.	65	DNL 51	65	65	05	61	65	05	65	0.5	64	05	65		64	60	60	60	60
50	79	74	13	19	40	41	81	45 1	HO	61	61	81	• 1	80	10	19	19	80	60
15	44	61	65	67	86	85	85	35	85	85	45	64	85	116	85	8.5	16.6	85	85
45	46	61	88	46	64	.0	91	99	90	90	90	40	91	90	64	85	40	87	41
00 D#•••	85	85	16	14	13	15	46		96	45		95	*	V6	9 1		40	76	96
				70	69	NV	81	40	41	49	8 4	4	4.0	HH	40	84	41	66	87
0	•0	442	•0	40	57	15	50	50	40	20	21	24	41	51	12	57	51	21	71
10 75	11	10	10	15	73	0/	55	60	73	21		>1	50	55	50	6.1	50	54	58
15	7.0	61	eD.	0.0	176	71	65	14	18	50	57	57	66	95	70	/4	77	65	
9.5	10		. 2	* 1	49	40	12		22		62	./	90	74	60		10	82	15
100	75	74	110	117	107	95		107	114	13		11	"		V4	104	104	104	114
					-	44	47		* *	51	50	54	51	4.5	47	/1	67	0.7	6/
4400	70	UNESI	A	e d				05	**	4.0		0.5	45		05		45	65	
Ü	40	10	10	2.4	10	40	41	40	•0	41	40	43	<b>m</b> 1	41	. 1	60		41	00
,	4.	45	93	44	6.5	40	65	65	81	46	45	0.0	45	45	05	45	45	45	
5	0/	46	n /	47	60	46	64	40	46	95	65	91	*0	93	#0	46	90	41	90
G.	* 1	91	43	42	91	48	47	9.2	42			45	45	7.0		92			
••••	40	05	45	9.5	45	4/	4/	6.	**	97	•/	49		••		•1	8.0	44	41
0074 C	10	6E NT 1	• 1	10	20	10	25	2.5	21	15	10	21	15	25	12	50	25	15	15
	71	15	15	1.		.0	5 5	0.1	0/		41	5.1		51	. 5		. 5	55	• 1
,	41	46	45	45	10	71	45	70	41	50	55	50	3.0	45	/ 1	"	7.5	41	15
5	45			**		10	15	05	24	71	0.0	14	16	1.	15	61	76	45	70
	40	107	105	107	42	71	95	75	61	50	50	9.7	92	25	¥7	10.	10.	104	10.0
	-t a							•		, -	, •	~ >	-0			• >	16	46	14
)	77	51	31	21	57	50		57	51	44		./		44	. 5	50	50	30	51
) }	10	10	00	75	10	41	0.5	# 7	11	47	41	47	07	6.2	7.0	10	14	0.1	10
	40	40	48	41	V.0	.0	7.1	9.1	0/		47	44	VO.	07	45	41	-	44	
	45	-5	44	67	*1	**			15		22	. 5	45	*0			41	95	
•••	45	41		05	**	10.	10.	100	100	105	97	100	10.5	**	44	41	**	105	104
100	611.	-1 41	Co						477								• •		4"
0	17	21	24	2.8	5-	5.5	. 1	5.3	21				41	54	15	50	54	54	27
)	00	50	50	55	0.1		**	• •	50				-		.0	51	40	62	61
b	97	0.3	0.1	92	10	13	13	71	71	70	10	01	71	10	4.5	• ?		44	
	01		13	15	10	41	W0	41	10	IV	15	16	11	13	71	70	75	15	00
••••	7 5	1.	#1	41	15	10	10	77	96 72	10	41	41	87	10	14	11	70	.1	#0
					. ,							4 3	1.	/-	70	44	71	13	12
-1.	50	5.1	21	21	14		50	54	21	45	05		45	01	52	Sa	50	56	21
	10	07	69	44	71	1.	"	1.	/1	•0	62	45	41	• 1	10	12	11	7.0	15
	40	10	e0	7H 40	01	41	45	45	81	-	10	01	45	A4	0.5	60	44	8-6	45
	44	20	4.1	94	45	47			44		91	.0	40	46	25	42	91	71	9.5
• • •	15	1.	15	75	11	#1	15	43	*2		05	44	95	91	91	74	.5	¥5	95
		F1L 0					-4			-,		٠.			.,		47	-	#1
	5.1		-0	44	50	50	> 1	50	••	54	••		56	54	50	55	5.5	5.5	46
	10	71	05	70	67		71		A	74	1.	10	11	14	15	71	15	14	71
	13	12	71	12	11	15	15	15	12	62	67	99	#2 **	62	F1	15	0.0	41	7.0
	15	15	15	16	7.	"	6.1	96	HO	85	95	8/	10	87	84	40	45	07	60
• • •	12	11	71	40 72	77	67	15	15	11	92	•0	V1	91	*0		-	90		V 1
	IIAL .		•			•	. ,			•/	-	45	76	45	# 1	"	•1	H2	78
	*5	5	5	5	19	52	40	19	5	42	51	40	42	42	51	25	23	25	5
	44	15	•0	37.	5.	50	6.5	55	46	11	1.	15	15	47	51	45	56	84	55
	41	46	52		50	61	12	64	57	11	80	F 9	60	15	65	51	65	74	47
	55	5.5	54	51	45	16		11	7.5	-	64	47	44	81	66	60	45 76	78	83
•••	47	40	./	69	36	66	12	65	54	60	46	46	96	84	60	51	88	76	65
			u.	5. A.				101					•			••		.,	0,3
	-22	-51 15	-26 18		-21	V		-21	- 11	54		• 0	54	76	16	- 9	- 0	- 4	-51
	50	26	79	10	45	50	61	67	31	68	61	40	80	57	50	55	6.5	60	46
	55	51	54	\$5	51	67	/1	68	55	81	85	65	85	16	64		69	87	71
	46	42	4 5	4/	68	15	61	80	71	89	65	71	95	HS	14	50	61	97	86
)	45	54	36	6.5	14	44	95	85	95	100	104	103	104	9 11	87	15	98	104	104

<sup>•101--</sup>FIKS1 GUANTER DEC-JAN-FEB •1HF--FIKS1 HALF YEAR DEC---MAY ••ADM--AVERAGE DAILY MAXIMUM PAGE 202

PRUB	DEC	JAN	FEB	IQT+	MAR	APR	MAY	701	iHF	JUN	JUL	AUG	SOT	SEP	OCT	NOV	491	2HF	AN
HONROV														+					
0	51	55	68	55	67	60	60	60	55	65	61	65	61	65	66	61	61	61	55
75	80	40	19	79 85	81	80	85	80	80 85	80	76 79	77	11	177	78	79	/8	17	78
85	86	86	#3	86	85	86	85	86	87	81	81	80	80	80	80	83	82	81	84
95	84	69	86	89	87	89	89	89	90	64	83	83	84	82	83	87	86	85	89
100 Aug- • •	84	90	85	80	87	81	91	87	93 86	81	85	86	80	85	86	89	89	89	93
IONTEG	0 641	. JAH	AICA								-								•
0	57	51	50	51	58	63	66	58	51	68	66	68	66	68	65	62	62	65	57
50 75	7H	61	81	82	11	87	80	78	78	85	85	95	82	81	81	19	80	81	19
85	85	83	63	84	84	84	85	85	83	87	85	85	85	85	84	83	85	85	85
15	90	81	81	87	88	88	88	89	VO	40	91	91	91	90	86	90	*1	91	87
00	87	91	45	46	91	91	87	94	96	95	96	97	97	96	88	96	46	97	16
)41) A:		me x I C		-	-			•		•••			***		08	•	-	84	96
0	50	55	95	25 59	10	42	51	10	25	55	60	60	55	51	45	10	30	30	25
15	65	61	71	86	10	81	85	83	16	88	84	84	61	85	13	71	61	76	82
15	64	71	76	71	80	85	84	81	61	90	88	90	•1	87	81	15	85	40	86
45	79	80	65	81	84	95	96	95	42	96		45	91	93	6/	43	45	41	95
)4	05	94	15	68	100	105	107	107	107	105 V1	105	102	105	101	95	7:	101	85	107
nie vi		UHUG	UAY														-		
0	• 1	15	12	71	-0	90	29	54	24	25	26	21	25 51	55	30	58	20	25	25
5	11	60	19	19	70	6 9	65	71	11	54	51	58	58	95	61	71	50	55	71
5	80	8.	4.5	84	60	10	6/	76	62	6.1	61	61	62	65	/1	15	15	• •	76
5	102	104	105	V)	66	6 5	15	86	65	6.0	69	66	70	13	80	6.4	62	40	84
	102	81	105	41	74	71	47	71	76	59	8 1 56	59	59	61		74	98 98	48 65	109
nine a	ie. 0	ut at C																	
0	-24	-27	-26	16	-50	.5	24	-20	-54	18	10	4.5	10	59	50	-16 15	-10	-18	-29
3	5 1	2.	20	54	519	52	64	50	**	15	10	14	75		50	45	41	13	•0
5	10	24	10	5.5	. 5	51	6.9		52	16	14	"	78	70	50	50	67	10	61
0		54	34	51	5.5	61	10	16	60	61	No.	60	66	18	41	50	11	86	80
****	20	21	21	21	55	50	0.	94	10	10	10	15	76	90	54	19	55	97	50
SCOW.		5. 5.	4.																
0	18	-27 15	-17	-21	-20	59	33	-20	-21	51	4.5	10	.11	5.0	17	-5	-5	7.3	-51
5	54	24	24	20	15	40	62	34	• 2	70	12		65	52	•0	27	51	65	• 0
	5.1	24	41	10	54	57	00	59		14	15	15	15	91	51	37	57	71	41
>	17	31	5.5	16	.5	0.5	10	<b>7</b> 1		64	8 5	65		1.5	30	. 2		62	11
••••	5 3	21	21	55	55	40	03	46	15	71	70	12	76	61	14	31	46	40	**
01 5.	MANG	HUR 14												-					•
2	-50	-54	-21	-21	- 6	16	5.5	- 4	-21	40	54			12	16	-15	-15	-15	-21
0	15	11	17	14	12	. 3	95	44	11	7.5	18	10	10		50	\$2		62	
3	5.	4.5	24	29	41	57	75	60	55	41	85	63	81	71	50	• 5	63	14	
5	5 00	12	40	54	5	71	60	10	0.0	91	80	40	86 V1	15	61	• 9	69	#5	71
0	25	45	5.1	57	88	46	71	91	V1		102	76	101	21	10	16	#0 V3	105	10 1
	52	55	2 m	25	• 5	61	14	34	+3	40	AZ	05	65	15	41	41	50	15	51
HICH.	->	- 14	- /	-14	-3	14	24	-2	-14	9.6				40					-2
	51	24	51	10	74		50	**	10	60	4 D	67	61	56	10	57		55	- 10
	5 9	14		<b>41</b> 1		50	61	Se	51	.7		1.	71	61	5	45	51	10	61
	4.5	• 1	45	45	52	51	05	0.5	51	70	71	11	14	66	54	49	61	71	61
	51	22	51	03	60	65	71	15	69	11	63	44	41	71	00	51	70	.0	78
••••	10	31	17	15	.5	34	61	54	45	69	15	71	71	61	35	45	55	45	51
.074																			
	24	14	20	10	21	21	16	5.5	19	• 6	54	>1	46	51	17	28	34	26	19
0	71	• 0	-1	40	52	56	71	55	46	18	RO	45	78	15	64	55	64	/1	60
,	54	4.4	50	52	55	67	73	01	61	81	87	90	65	8.5	10	65	11	85	10
5	45	55	50	61	6.5	14	14	16	71	84	92	V5	94	88	61	70	44	A5	65
0	15	00	75	75	15	45	88 71	P-4	57	80		101	101	95	91	40	95	101	101
PU4.	LNUL					4.6				90		+0	A6	8.5	15	95	15	19	68
	42	• 1	44	91	41	61	67	41	41	10	70		64	66	51	19	19	50	19
G	8.0	70	15	/1	61	91	96	40	40	89	82	# I	64	45	14	73	18	61	80
•	14	11	62	78	65	96	102	100	¥0	40	85	65	49	66	85	80	56	V1	91
5	85	90	45	42	105	101	105	101	100	97	88	47	45	8.6	87	8 5	90	95	95
0	45	95	102	102	111	115	114	110	10%			100	101	102	101	96	102	104	105
M	41	83	4.0	8.	94	105	109	104	94	VR	88	6/	91	80	40	85	BB	90	45
4081	. KIN	AYA	48	47	•	52	48	48	47	45	4.5		45	41	45	43	41	41	41
0	65	66	01	66	61	61	64	66	66	63	60	61	61	64	66	65	65	63	64
5	71	10	12	/;	15	70	66	/1	/1	66	65	66	0.6	69	71	10	71	68	10
5	15	ii.	/3	79	14	12	10	15	/3 /4	68 73	15	75	13	16	13	72	73	71	13
										, ,			, ,		* 13	11	78	"	19
)0 )M•••	14	11	H /	87	86	A 2	A2	86	67	80	10	60	40	82	86	85	86	86	87

<sup>•1</sup>QT--FIRST QUARTER OEC-JAN-FEB ••1HF--FIRST HALF YEAR OEC---MAY •••40M--AVERAGE DAILY MAXIMUM

SURFACE RELIABILITY TEMPERATURE IN DEGREES FAHRENHEIT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

PHOB	0.6	c .	AN F	LB 10	T . MA	0 40		4 201							£2 OF		BEING	EXCEED	E0
					HA	R AP	R MAY	201	IHF **	Ju	N JU	IL AL	IG SUT	SE	P OC	T NO	V 40	2HF	ANN
NAND1	l. F1		SE AND	5 67 6			1 61	61	61										
50	1	v	80	HO HO						;		5 5	4 14						55
15	d d			84 84			5 81	A 5	He	i			6 /6	1 %					82
V5	86			66 H6						8			0 40	8					85
100	4			17 41					69	91				81					40
A0#	• 45	- 3	10	10 86				64	85	8				90				80	94
NANKTE																- 61	(5)		
50	40			7 8				25	4	52	7 6		2 52			21	21	21	ાત
15	46			9 SH	55			50	4.4	10			1 #0	71	6.5	51		71	60
45	51			0 51	60			61	65	43				79		59	12	82	12
45	62			0 62	10	74		82	11	41				88		10		87	7.4
100 40***	11			H 78	HB	43		91	91	Ve				96		42	69	10	104
-0	40		, ,	0 46	35		7.4	00	>6	6 1	ele	44	1 46	80		>3	10	18	67
MAPLES		ALY																	
50	24	2			51	50	45	211	24	51				5.5	4.1	14	14	\$4	24
15	51	5			57	04	70	10	62	12				1.5		50	64	6.9	62
45	54	>	6 >	1 56	60	00	75	71	61	60		43		41	10	07	12	10	15
100	0.5	6			86	12	40	14	10	46	+2	*1		99	14	64	76	10	10
ADM	57	3			60	67	71	01	61	95		+1		100	44	11	100	101	101
				• • •					01	41	40	46	4	81	15	4.5	12	14	10
445540	. da	AMA		1		> 1													
50	15	- 7			10	73	7.8	15	70	62 71	67	67		65	54		. 9		4.1
15	"	<b>e</b>	) /	1 11	I a	40	- 4	42	41	75	97	45	42	42	10	76	70	76	10
45	61	6.			81	02	05		0.5	10	0/	46	4	87	40	91	45	45	H 6
100	96	41			66	46	*2	He W2	42	0.5	9/0	40	44	4.0		46	.0	₹1	90
40	10				10	41	-	01	10	01	9.0	44	94	47	45	4.5	42	74	**
WATAL .	-	14															",	150	8.5
- 0	66	64			0.0	0.1	05	61	61		6.5	61	0.5	00	54	45	44	W.	4.
15	62	6 / B M			61	+0	10	40	40	"	10	10	16	14	60	41	110	65	61
41.5	85	86			85	45	67	45	45	40	10	10	10	0.1	0.5	4	4.5	e 1	4.5
4%	41	41	9/	44	47	41	47	84	44	65	6.5	0.0	# 1 # 4	85	44	40		4.5	45
100 40=+++	44	49.0			¥3	48.4	91	VI	71	40	0/	0.7	49	44	90	47	44		w1
	70	31	***	40	40	44	42	46	40	H S	45	42	67	8.	45	84	-5	-	45
Me CEL		1 40 1	-																
50	50	51	62	60	15	55	05		4.1		7.1	11	66	6.6	5.1	H 1	.1	4.1	15.0
15	00	04	69	67	0.0	45	43	43	71	9.5	44		6 4	4.	20	64	" "	4 5	11
PF 19	00	6/	/ 5	79	4.5	**	101	96	01	102	**	46	75	44		15	40	* 5	6 4
100	15	1.	#0	74	91	102	107	104	**	107	10.5	4/	105	97	45	74	He	165	75
ADTI	15	10	75	7.5	101	97	105	115	115	115	113	104	115	105	105	* 5	105	115	102
							103	**		102	**	¥ 5	97	9 5	v 5	4.	40		
0 0=1	LASS.	15	. u.	5. 4.	24	54	1.0			100									
50	31	30	54	31	6.5	70	76	24 10		47	45	0.5	50	34	• 0	24	20	20	,
15	9.6	65	70	64	71	11	42	10	10	98	49.41	9.5	65	40	60	71	H2	"	10
¥5	10	15	40	13	75	40	85	et \$	6.1	.0	PG	VO	91		4.5	14	45	91	
106	40	et 5	45	105	70	71	47	47	**	95	45	45	76			-0	+2	v/	94
A	65	00	01	65	71	10	44	78	71	102	102	100	102	97	-0	70	70	107	102
16 - TON	a. s.	7.	U. 1	. A.												0.4			
C	-2	9	- /	-1	,	25	57		-1		50	5.5	45	42	12	17	10.	4.5	
15	10	35	1.5	50	51	50	61	51	42	71	PA.	14	18	0.7	24	47	54	66	-/
45		40	0 S	.;	50	54	6H	67	55	PH	0.1	40	41	1.	05	55		11	
45	34	50	54	50	61	17	01	10	62	#1 #9	**	4 h	92	0.0	6 V	50	14	42	15
100	10	12	10	-0	86	40	40		96	101	100	163	161	102	74	4.5	102	103	10.5
			**	•0	4.6	34	10	50	**	<b>e</b> 0	44	45	45	16	65	5.5	45	75	
MICOSIA.	20	75	23	25															
	50	50	51	51	27	67	12	03	25		52	31	. 9	40	.0	24	20	26	25
13	60	50	21	54	62	70	40	73	67	10	41	.0	90	In	70	62	70	15	66
	62	50	61	0.1	66	10	0.4	10	7.5	99	95	*1	74	44	10	10	#0 #5	- 5	78
	10	10	10	70	74	45	94	90	20	45	10.5		10.5	96	91	61	74	105	20
	02	54	71	60	65	14	10 V 1	100	100	91	97	100	116		105		106	110	110
WINE . AL	A5+A												95	91	41	13	41	**	"
0 -	42	-6/	5. 4		- 50	- 50	-11 -	\$10	-61	20	2		20	100					
2.0		•	6	6	V	20	50	21	15	20	24	44	20	16			- 10	- 50	-47
	25	16	14	In .	20	\$2		15	24	5 5	50	20	>0	44	10	16 28	79	50	36
	51	32	23	34	55	3/	- H	60	15	51	60	30	60	51	41	11		67	51
100	•0	40	41	41	44	0.0	56	57	90	60	44	07	69	51	N#	41	51	7.5	05
ACHee	1.	11	14	1.5	17	24	•0	28	21	51	55	55	54	44	54	50	15	86	33
NOUMEA.		ALEO	0514										2 1						4.5
0	18	14	14	65	65	61		50	56	55	52	54	52	35	56	.0	55	52	52
	42	0.5	6.5	7 P	# 5	41	/ /	76 H1	H.S	71	64	64	69	71	7 5	10	15	71	76
	85	H5	46	H5	H5	H 5	19	H S	RS.	15	15	12	16	17	11	90	7A HO	16	60
	90	90	41	91	44	AB.	H4	88	91	82	80	19	d1	42	#5	87	46	19	44
	110	46	85	86	95	46	77 .	44	99	40	#/	65	de	90	¥ 5	94	14	44	99
. 1				- '					.,•	"	16	10	16	18	<b>B</b> 0	H \$	40	74	41

<sup>\*10</sup>T--FIKST QUARTER DEC-JAN-FEG \*1NF--FIKST HALF YEAR DEC---MAY \*\*\*ADM--AVERAGE DAILY MAXIMUM PAGE 204

OKINA	44.	. YUY	KU	F#8		+-	AR AI	PR MA	A 30	T THE .	J	UN .	UL	AUG :	501	SEP	100	NOV	401	T >Hf	AN
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>0			60	54	01			0 1	6 /0				84		85	81	51	54			
85	7		66	00	66			6 8		/4			86		88	86	80	69			
45	- 7		10	10	71	8		9 8				es	90		40	68	87	80			
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4 0M				75	49	35				57	80	•		01 10	11	95	72	80	95	101	101
0510.	¥04 4														1		•	••			48
50	-10	-3		26	-21	-10				-21	\$ 1		2	37 1		26	12	2	2	2	-21
15	14			10	17	42	51			10	60				2 '	5.5	45	15		52	
95	.0	5		.0						56							51	•0	55	45	50
V5	* b			46		50	61	71	10		90			,		2	61	. 5	57	10	- 65
100	51	3		17	11	+0	50		51	8.5		¥	f (			77	70	57	11	95	V3
JI I A mA ,							90	07	71	61	49	,	\$ 6	9 7	0 4	0		37	40	59	50
0	- 50	- 5	-	AHAE	- 15	- 54	->	/1	- 50	- 45	3 5			15 5						L/Dec	
10	24	12		15	70 -	- 19	• 1	55	• 0	21	05		0 6	6 6	1 1	8	10	-10	-10	-10	-55
45	5.5	3.		70	31	100	52		90	51	75			. /	0 0	8	5.	. 1	60	/1	40
25	. 5	91	,	•0	41	59	4.	7.	7.0	40	45			7		\$	50		0.0	11	68
00	35	34		77	35	10	40	**		9.	97	10	10	0 10			61	71	102	102	102
40446.				"	"	5.5	\$1	46	50	50	74	4	1	1 1			50	5 A	56	**	51
0	10	FO		64	47	10		71	70		44	10		A 64		0	/a	**	(40.0)		
50	40			41	=0	el	41	4.7	0.1	9.1	61	41					80	40	70	40	8.6
45	4.	45		45	45	65	45		6.0		8.	6 1	eg				65	45	. 5	4.5	80
25				19	40	40	44	40	45	95	46	49					46		46	45	45
04	44	95		06	40	45	47	91	**	**	V 5	AJ		2 +1		1	92	47	47	48	**
	(11+		\A=1					44	91	76	AZ	41	a	/ 6/		•	64	46	46	41	61
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15	40	40		10	#O	0.1	47	9.1		40	•0						ZA.	/A	74	47	40
45	43	45		16	76	47	94		45	95	4.5		4				2	42	-	25	45
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0-0 0-4-4-4	44	44		9	95	40	¥/	**	A 7	77	95	*5	•	95	91		15	40	95	95	91
1415. 6	HANC									4.0	**	47	9	67	44		5	.5	45	46	41
0	•	-		•	•	20	20	15	20		•0	. 1		0	51			15			
10	54	17		¥	54		51	51	5.1		6.5	86	65		40		7	15	15	15	
15	45	.7		0	53	31	31	46	5.	55		7 5	71	12	6.7	5		51	61	>#	51
15	30	37	5		56	67	62	11	15	73	75	11	79		70		2	50		15	/3
00	47	50	-	•	64	15	40		07	*2	47	104	# 1		74		0	40	11	44	. 5
	• 1	• 7	•	9	4.5	37	60	67	40	51	15	70	14		40			• 4	20	07	59
19196.	CH1	AP			<u>.</u> [	1.0		2		167											
	24	25	8	-	74	15	31	50	33	- 1		67	5/		10			10	10	10	- 1
9	50	12	\$		10		65	10	67	55	05	97	40		/1			41	51	44	35
19	84	13		2	•0	35		- 1	15	62		90	48	*1	70			54	72	45	
	50	50	5		**	11	40	107	44	7.4				94				6.5	41	47	10
	50	5.5	\$		59	37	44	40	67	51	107	10A	105	10A	92	6	4	19	97	10+	100
win, A																,				• •	-
	71	10	10		75	**	50	10	50	50	15	50	55	10	10		0	42	59	34	50
	7A	#1	92		91	/1	AF	61	44	70	51	50	56	50	50		,	. 7	62	50	64
١.	47	#>	44		15	42	10	12	40	40	0.5	6.1	67	67	65		•	14	10		7.
	4/	43			95	9.1	-	2.0	A O	95	77	6.5	71	12	77	40			/-	12	79
	61	45	112		12	61	76	90	106	112	62	10	67	42	91	95	10	05 1	05	105	112
5#A444	. PA	151						٥.			••	. 5	**	4.4	67	10		10	/1	47	73
0 2	70	26	\$1		76	36	61	52	10	26	e5			65	Se	• 1		1 5	5.5		
	51	57	61		50	71	41	47	18	0.5	.5	91	8.5	40	64	7.5	. (		73	61	76
5	6 5	61	65			76	45	96	**	**	102	101	**	97	00	41	1 (	4	45	45	95
	/1	47	7	1	7.5	M2	94	105	106	9.	109	107	165	101	100	-1			# / V /	104	40
	4.5	05	66		00	75	10H	114	110	76	120	122	118	122	110	101	•	1 1	10	10H 122	105
LADIL		- FA			. A.					-				.03	40	84		"	n /	45	95
0	1 50	11	50	3			24	15	1	. 1	44	52	50	4.	10	211		15	15	15	1
	45	• 2	47		3	52	57	61	57	55	13	16	14	14	615	51	•		51	65	54
	4 4	41				57	64	15	64	61	81	85	80	85	80	69			68	11	68
	\$4 72	14	74		1	64	15	65	0.0	15	90	92	¥0	92	88	19			/ 5 6 4	42 V1	11
		41	42		2	52	45	74	05	96	100	102	101	102	100	96				102	102
4000		•••									8 5	A/	19 %	15%	76	61		15		.07	

<sup>•1</sup>QT--FIRST QUARTER DEC-JAN-FEB ••1HF--FIRST date Year Dec---MAY •••ADM--AVERAGE DATEY MAXIMUM

SURFACE RELIABILITY TEMPERATURE IN DEGREES FAHRENHEIT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

PKD8	0£C	NAL	FŁB	101 •	MAR	APR	MAY	201	1HF • •	JUN	JUL	AUG	505	SEP	OC 1	NOV	401	2HF	ANY
PHOEN1 50 75 85 95 100 Apress	X, AR 22 52 60 54 76 84 68	17.50 54 67 71 85 65	U. S. 22 36 63 61 15 84 70	A. 17 52 61 65 74 66	97 60 68 77 60 97	52 67 76 41 90 106	47 76 84 49 98 113	74 67 78 63 95 113	17 60 72 74 91 115	50 84 93 97 105 117 102	61 90 97 101 107 116 105	60 48 45 94 105 115	50 87 96 100 107 117	49 43 92 96 105 118 98	36 71 80 84 92 104 88	25 56 67 71 79 91 76	25 71 83 88 100 118 87	25 79 97 106 118 95	17 65 83 94 101 118
PIEIE			SO. 4									4.74			40	•0	26	21	21
50	71	71	10	10	61	64	37	27 63 71	) / 00 /0	21 52 59	52	2 H	21 51 61	95	67	69	66	59	65
45	90	40	80	41	10	80	61	75	19	62	64	61	65	74	11	HO B7	79	74	70
100	45 81	44	44	76 81	46 71	61	84	93	76	19	82	45	86	97	19	80	78	75	99 76
40M+++ P154.	01   ALY	01	80		1		•	• • •	70					1.5	• •	•			
0	50 50	25	21	21	2V 52	57	45	57	21	52	55	15	52	71	42	56	35	55	21 61
15	37	50	30	35	57	01	69	65	61	14	40	41	45	16	10	03	75	40	71
95	61	90	61	67	00	66	11	15	16	81	44	92	84	85	62	15	40	99	45
() <b>4 • • •</b>	55	52	54	54	51	62	50	0.5	54	15	80	•0	f a	16	64	61	64	15	
0	346.	-0	U. S.	A:,	12	20	12	12	-1	4.5			4.5	34	16		•	•	-1
50	51	20	10	10	10	3/	60	54	52	15	12	10	10	15	5 5	• 1	5.5	67	51
85	51	*1	34	54	50	61	10	61	57	85	44	40	41	95	65	55	70 81	10	85
100	50	• 3	6V	54	12	50	47	37	47	46	44	47	49	10	65	17	97	12	40
	4.6	37			**	3.	"	•	•	**	43	91	01		.,	••	•,		••
Pelsic	54	56	54	54	70	54	60	50	54	57	57	51	51	0.5	54	•0	54	5/	54
15	13	14	10	15	10	10	11	10	/ 1 / 6	19	15	00	15	10	15	11	15	75	7.0
45	61	40	41	#1	13	00	02	81	40	8 5	46	41	41 S	40	65	84	45	61	60
00	44	99	44	44	05	10	60	"1"	10	40	60	68	41	45	81	80	61	41	45
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13	01	01	34	42		45	05	45	75 to	49	44	nl	40	44	45	46	45	98	86
45	44	41	40	49	71	91	35	42	91	W 5	45			92	91	₹0	97	46	95
00	98	01	45	45	94	40	•9	0.4	44	45	101	101	101	91	90	44	40	101	101 40
1. Ei	/Ant	le, d	. 50.	AFRIC	A														
10	21	10	10		09	47	61	51	51	51	50	30	57	59	99	43	55	1,	3.5
15	15	10	01	16	15	11	17	71	70	65	01	65	00	12	75	12	10	13	17
06	94	65	104	104	10	45 101	95	104	104	14	70	0.0	40 98	103	42	104	104	164	
	15	10	10	11	10	7.5	/1	15	15	64	47	64	6.0	611	10	12	10	64	2
	(Courl		Gem 14		-37	W.	5.3	14	0.0	-1	65	0.4	61		67	6.11	67	63	60
36	10	60	45	40	40	61	40	# I	m0	19	2 15	. 11	10	7 d	10	00	14	16	10
15	45	83	41	45	84 87	46	45	42	45	et 5	45	11.5	42	11.0	4.5	45	45	45	40
100	75	20	# S	43	91	45	9.	93	49	45	47	01	45	95	90	95	95	45	44
D#***	m /	-	49	44	69	44	9.4	49.46	48 46	45	0.0	45	4.	115	45	41	40	45	al
0 40	70	64	A C	81	10	05	10	45	45		00	0.0	64	54	6 8	59	00	64	64
50	45	44 S	47	47	47	45	41	41	12	45	8.1	41	42	174	45	42	45	45	41
45	45.00	44	40	44	47	47 V1	44	91	40	44	6.5	42	el 5	114	45	91	40	85	91
100	11	94	95	44	46	44	40	46	94	91	45	40	45	91-	49	46	10	V6	46
	40						79				7,	70			1.7				
0	46	51	4/1L	46	**	4.1	50	10	10	24	25	10	25	12	10	4.5	12	25	25
75	15	0.5	14	15	11	10	65	14	45	54	94	01	67	70	75	10	75	17	14
45	45	45	10	47	# 1	40	41	40	75	71	11	/1	11	74	H6	41	81	70	82 V2
100 ADM•••	10 5	67	105	105	102	14	71 71	102	105	99	94	9.7	67	10	100	100	100	100	105
P1. OF	SPAI		18104																
10	60	16	31	31	77	11	57	54 8d	77	60	57	90	14	50	80	19	14	72	10
15	82	e 1	8 1 8 4	42	45	45	45	84	9 S	94	87	45	45	84	80	85	85	86 88	85
100	41	84	45	40	91	71	92	92	91 99	40	92	45	42	101	91 98	49	101	101	101
ADM		45	116	16	87	dH	8.	ВН	87	47	87	81	H /	1 84	88	31	88	47	81
				DEC-															
401	AVE			A WART		• •								HOEIN				NO.	D6-71//
PAUL 2	υb												INA	43FUH		. 5 . 0 4			

0 75 75	-15 52 45 52 60 54	ECHOS -16 50 40 45 55 54	LOVA	KIA 2 -16 5 51 6 46 7 53 7 60		5 59 id 5	21 : 68 5	30 5 57 48	5 -16 5 -60			6/	UG 30	2 3	15 2 17 6	5	3 50	2 2	-16 49
0 75 H5 100 A04444 10 10 10 10 10 10 10 10 10 10 10 10 10	-15 52 42 45 52 60 54 1CK 12 40 46	-16 50 40 45 55 56 5011	-I.	2 -16 5 51 5 42 6 46 7 60		59 i	bH 5	5/ 48	40			66 (	65 65	s   š	4		\$ 50	0 57	
75 H5 10G A0M***  PRESIMI 0 50 75 H5 H5 100 A0M***  PULATO 0 70 70 70 70 70 70 70 70 70 70 70 70 7	42 45 52 60 54 ICK. 12 40 46	55 55 56 50 50 50	4 5 5	9 91		59 i	bH 5	5/ 48	40			66 (	65 65	s   š	4		\$ 50	0 57	
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#5 100 A04***  PRESTWI 0 50 #5 #5 #5 #5 #5 #5 #5 #5 #6 #6 #6 #6 #6 #6 #6 #6 #6 #6 #6 #6 #6	57 60 54 ICK. 12 40	\$7 \$5 \$4 \$CUII	Se Se	60			V 6				0	12	/l /2		5 5	6 5			
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45	15	10	70	15	1 23				49				0 60	6.0	50	52	52	57	
	40	60	87	0.1	9.5				44	1				0.1				40	10
	d 5	42	10 0	m 5	81				46	81				85				46	45
15	11	40	44		40	1			16	91				94				66	64
100	22	¥0	95	45	45				41	91				97				45	92
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	64		61	01	6.4	/1	71		40	70				5.5		51		51	45
	7 5	70	15	15	14	15	76		14	14				/1	10	49	70	10	
	15	11	74	15	111	14	7.0	19	"	10				15	74	15	14	14	15
	65	0.5	40	40	9.5	45			0.5	6.0	19	110	60	60	40	10	66	00	/4
	7 m	15	"	"	7.	41			/ s	70	70		46	95	46	4	46	86	95
	CUAD				1									00	10	"	14	10	74
	34	57	54	10	40	•0			14	50	5.5	10	5.5	35	52	15	12	12	4.9
	65	35	93	45	9.0	0.5	50	50	50	54	5 8	59	50	59	50	59	50	59	52
85 6	B &	61	6.6	• 0	07	46	47	07	65	64	54	45		95	6.3	35	60	65	00
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0 5	> 5	33	50	55	6.1	946		.1	33		10	0.0				2019			
	7 10	11	9.0	10		47	45	45	42	0.1	41	91	66	01	97	61	61	6.1	55
	45	75	85	97	40	91	4	9.1	40	64	45		-	6.	65	65	41	91	d 1
	0	41	45	92	47	10	v1	94	41	46	45	45	86	85	8.0	97	40	46	94
00 •		00	101	101	10.5	104	105	100	106	90	44 V S	44	41	9.0	40		91	43	41
	<b>0</b> (0	44	22	90	9.5	41	42	95	*2	-	45	45	05	64	45	65	01	74	100
0 2	11. d	4415	31	24													-		-
	1	52	55	5.5	36	73	52	75	76	65	6.9	6.0	85	5 d	4 5	5 5	15	35	24
15 6	0.0	3/1	e I	40	71	91	97	73	65	47	61	m ¥	70	44	15	.8	15	al	12
6 6		61	65		14	45	24	90	#0	132	I 0 1	**	101	90	91	69	0.5	25	ds
00 4		10	75	75	42	26	105	100	94	101	107	165	109	190	15	13	41	76	90
/f		65	00	65	75	10e	74	114	119	100	122	51.9	122	150	101	91	110	109	103
	4075	5		1000						100	10.5	+9	105	**	84	**	81	45	95
0 7	0	/1	40		69	9.9	49	0.0	9.9	0.5						500			
5 4		m 3	07	41	4.5	49	10	90	41	14	10	10	70	70	64	69	66	64	64
5 40		10	m5	85		45	9.1	6.5	rie .	60	10	10	40	91	40	# 5	10	10	10
> 40		46	44	44	40	44	43	-	45	4.2	62	-6.1	41	9.2	44	95	45	65	45
0 0	1	76	# 5	74	**	# 5	40	74	99	45	0.5	00	15%	45	45 8	01	91	76	40
**** **	1		46	44	86	45	0.5	25	45	93	#0	88	9 1 1 1 1 1 1 1	40	91	91	81	91	**
505 UIS #		٠. •			¥									-			04	42	4.
0 -21		5 -	> .	-54	->>	- 54	-20		-55		20	17		0	-74	-45	- 4.4	-64	- 6.6
5 -12				-27	-25	- 49	16		-10	54	40	5.7	11	25	3		79.5	25	- 55
				13	-4	5	21	15	-6	90	4.4	47	44	29	12	-0	10	50	10
> 2	,	2 -	10	-0	2	15	5.5	24	16	42	55	**	57	5.1	15		25	41	25
0 57		8		11	20	10	40	.0	10	51	60	>0	45	10	10	1.5	51	50	5.9
1000 -14			14 -	-20	-15	1	23	5	- <del>V</del>	\$11	45	1	41	21	11	-5	12	21	•0
TEJAVIE,		L 440	4	40		14	ris.	9											
9 54	. 1		55	55	55	50	19	5.0	50	52	10	54	52	21	16	10	10	10	
5 41	1 5	4	14	.0	4.1	44	51	41	44	50	57	57	57	*/	40	56	45	46	• 1
			1	47	44	.1	5 5	50	41	30	60	50	24	54	40	4.1	48	55	50
3 5			0	55	50	25	50	50	54	61	65	64	65	60	55	46	58	65	62
14			\$7	37	54	45	50		41	55	50	51	57	6H 51	5H	55	68	10	14
	ALY											- 1				3.4	45	51	4.5
				50	29	54	44	24	20	51	56	50	51	54	42	35	44	26	20
2 .				44	4.6	62	65	56	52	71	"	76	15			53	61	35	50
0 40		0	NO .	Sta 1			64	55	A-0	16									
0 40	1 6	?	0	57	57				60		88	18	18		66	51	69	16	10
0 20 0 46 6 51 5 55	) 6 5 6	?	5 S	57	57	65	70	66	71	78	84	8.5	15.5	18	66	57	69	80	10
0 40	1 6 5 6 7 6	2 5	1	57	51	65	10	66	64						66	51	69	16	10

<sup>\*1</sup>QI--FIRST QUARTER DEC-JAN-FEB \*\*HF--FIRST HALF YEAR DEC---MAY \*\*\*ADM--AVERAGE DAILY MAXIMUM

SURFACE RELIABILITY TEMPERATURE IN DEGREES FAHRENHEIT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

PROB					I EMP	ERATUR			ES FAHRE:	WHEIT	FOR G	IVEN	PROBAB	SLITTE	S OF	NOT (	EING	FXCEEDE	0
	De	C J	N FL	. B 101	MA	APR	MAY	201	1HF · ·	10	i Ju	L AUC	5 5QT	SEP	OC 1	NOV	401	2HF	ANV
H10 (		NE I RC		71L	1														
>0	,	1 1	1	3 36 V 7H	74		72	75	76	77				50	12			50	50
15	4			6 44	81		16	80	47	15	74	15	15	76	ii	78	77	- //	71
45	9	2 4	2 4		40	81	H.S	H >	85	11	76			170	60	41	8 1 A 9	80	8 1
100	• 8				81		**	41	102	90	91	V 5	V 5	100	102	100	102	102	102
					8,	80	"	40	85	76	/5	76	16	15	"	19	11	76	79
CAVID	H. S.	1005			1 51	10	57	51		17.14									
50	6	3	9 6		67	11	86	- ;;	08	67	95		67	61	78	15	15	55	19
15	0				78	89	V 5	He	HO	AH	94	Vis	**	75	84	70	48	95	77
95	- 77				40	44	102	100	96	101	101	101	107	96	45	81	92	100	95
100 A0mes	10				101	104	150	110	110	115	114	112	113	111	101	H /	101	106	105
				71	45	AV	100	40	91	107	107	197	107	102	94	*	45	100	90
404	IIAL		21	2.5		21													
50					25	30	03	25	20	20	10	10	10	50	57	. 52	12	12	20
45	33				50	0.5	7.1	01	0.7	71	81	6.1	01	12	70	**	72	78	71
15	50	53		50	67	75	41	40	17	80	45	71	41	42	75	45	11	02	10
100 40****	7.0	43			15	85		2.5	9.5	48	101	102	102	104	43	7.	104	104	104
40-00	30	50	30	35	67	6.19	/-		6/	0)	AR	44		0 5	15		75	00	71
SAIGON	. VI						4.5												
50	14	#0	61	40	10	96	10	46	42	42	67	82	07	6 V	0.00			• •	57
45	01	45	06	46		¥0	**	40	44		93	92	40		41	40	65	86	67
**	#1	47	76	76	41	97	40	27	90	42	93	40	68	46	-	-	41	He	₹1
100	41	**	102	102	104	10.	102	104	10.	100		95	130	90	**	*0	91	100	104
A04	91	4	v1	49	W 5	43	41	0.5	41	4.6	94	44	10	46	40	01	40	46	¥9
51. (a.	91	+1=6			4-		- *												
50	1 -	10	10	16	11	to to	00	10	77	41	70 81	70	49	60	40	44	6.0	6A	21
15	61	10	1.	e0	mi)	es 0	01	n 1	<b>e</b> 1	8.5	4.		25	44	45	42	41	44	45
42	63	40	40	41	01	42	65	0.1	45	50	97	65	45	AS	44	45	H 40	45	44
100	91		45	A7	9.0	91				46	00	41	97	91	40	45	01	4/	95
A04***	44	4-0	- 1	e1	67	# 5		m \$	m?	45	-	84	#6	90	#5	84	05	65	44
51. 111		See. 6																	
>0	f n	10	10	70	11	10	60	10	77	69	10	10	64	6.9			-	64	0.1
15	99.2	10	10	m3	90	or 1	0.2	#1	91	8 5	61	96	#1	40	41	97	# 5	-0	14
47	63	97	42	61	0.1	0/		9.5	42	46	42	45	415	05	66	45		65	44
100	01	60	45	47	# 4 # 4	01	9.0	0.5	45	0.9	41	04	84	44	46 V0	44	47	91	47
A04	01	#0	n	n I	01	# 5		4.1	91	45	110	46	75	40	45	**	41	91	45
11. 100			u. s.	A															
	1.5	-17	30	-12	)	20	15	. >	-12	60	50	34	98	10	21	1			- 52
15			4.0	-7	20	51	1.	50	9.0	01	01	05	20	7 I	0.1	• •	50	69	57
43	56	50	25	52	7.1	70	10	14	45		91	0.0	70	44	15	•0	13	45	41
190	13	15	15	10	a l	71	44	**	40	104	117	100	117	102	#1 V1	10	6.0		**
404444		4.1	65	4.5	30	-	15	65	>6	95	40	66	97	80	70	54	102	117	112
S1. 1 U.		S1. (		15.															-
90	10	70	20	70	17	0.5	9.6	50	50	44	60	**	00	ne.	05	66	64	44	>0
15	er 2	40	0.1	AL.	9/	10	m0	10	01	# O	40	0.1	00	01	•0	10	40	40	10
45	4.5	07	97	m s			45	0.0	95			20	AS	20	45	44	76	90	40
100	00	40	41	71	41	40	9.4	**	94	62	40	**	49	40		44	40	*0	4.5
Atless	4.	# 5	10 %	24	05	0.9	91	4.0	9.5	-	40	at	An .	96	al	40	86	01	40
51. MAA																			
,	10	10	67	71	93	10		64	41	6.9	10	70	69		60	44	6.00	AA	.1
15	0.1	1 -	10	40	410	Al		01	77	e E	45	0.1	84		•0	7.0	40	*0	10
45	43	40	-0	61	n.1	67		# 5	#2		45	45	85		41	45	94	45	0.1
100	01	90	47	**	**	41		45	44	99	91	44	91	6.6	9.5	95	97	28	47
.0	91	49	9.1	n 1	47			# §	Ad.	45	40	10	**		40	46	41	V1	*1
\$1. Ings		w1 = 61	N 15.																-
30	27	15	75	62	65			6.5	62	66	70	9.4	0.0		64	00	0.0	••	62
15		F 19	1 4	75	10			// #1	40	45	41	84	80		10	78	10	60	18
45	45	85	#0	HI .	e i	47		0.5	43	45		03	85	85	81	85	85	45	44
100	40	45 49	71	71	4.2	46.		96	**	44	97	44	84	44	4.	#1	30		4"
A04	41	0.0	40	110	81	77		07	*1	46	H &	05	14			41	96	85	45
51. VINC			GFAR	15.														20	27
>0	61	76	60	70	11			10	76	66	64	66	00				64	04	56
75 As	41	60	81	81	87	47	84		7 d 6 1	H 5	HG H S	H 1	HQ		#0 # <b>4</b>	7 V	HO	HO	19
95	45	87	43	85	87	44		86 84	85 84	88	H4	H6	85	90	HS	84	Ao .	46	56
100 45M+++		40	91	91	91	44	v 1	94	**	43	90	44	44		94	48	96	40	31
	8.	H 5	**	H&	83	46	H 7	Ho	45	H6	86	67	116			46	87	47	40
•101		T and		DEC- LAR															

•107-FIRST QUARTER DEC-JAM-FEB •1NF-FIRST MALF YEAR DEC---MAY ••AOM--AVERAGE DATLY MAXIMUM PAGE 208

THE BOEING COMPANY TRANSPORT DIVISION

0. 00-7177

PHOB	DEC	_			MAH	APR	MAY	701	IHF • •	JUN	JUL	406	301	SEP	100	NOV	401	2nf	AN
0	SLAND	50	51	DL 15.	50	54	54	50	50	61	54	6.5	54	85	50	54	50	50	50
50	11				10		12	/ 1	71	14	16	"	16	11	16	15	16	16	13
45	14	74	15	11	11	11	11	16	17	11	81	83	81	81	81	42	8 I	81	81
100	47			81	81	40	81	81	81 86	82	46 90	85	46	85	86	85	90	87	95
ADM			12	75	7.	15	76	15	75	18	81	81	40	70	18	19	10	14	"
54L 15	HUMY,	50.	KHOD.	41		5	10	\$6	56	52	52	54	52	37	44	40	57	12	12
50	10	64	84	84	104	61	67	65	61	51	51	61	58	00	71	71	69	64	65
15	15	15	74	15	13	13	68	12	15	6.5	65	61	65	13	11	"	"	13	11
45	45	42	et L	25	80	41	76	#1	46	66 71	15	7 1 7 A	10	16	45	80	80	85	85
100 AQ#•••	. 17	14	14	45	76	1 H	14	44	47	19	82	14	8H	97	9 5 A 5	41	95	16	45
54 V A1																			
0	15	51	>>	55	61	69	10	21 69	0	94	40	84	50	70	54	35	25	52	0
15	01	67	71	10	11	41	41	40	40	44	4.5	40	95	91	110	64	81	43	80
45	11	16	40	60	45	64	9 5	42	40	41	41	43	44	76	43	15	45	44	74
100 10#***	90	61	41	91	75	40	67	101	101	105	106	106	96	102	45	91	102	46	106
SAN DI	£ .0.	CALIF	., U.									11.2	10.15						
53	50	33	10	10	50	61	0.5	61	54	50	53	5/	50	51	65	01	40	.0	20
15	6 5	67	07	65	85	0.0		01	01	71	15	15	1.	15	/1	61	15	74	15
45	15	76	7.	15	10	70	4.1	40	71	01	16	14	17	16	47	75	61	14	18
100	45	enes	**	44	**	12	76	40	46	91	4 9	9.89	44	104	10	36	104	104	104
0	157	0.	05	65	10	84	10	64	01	12	10	"	75	16	7.5	71	75	16	10
0	0151 61		62	61	05	0/	47	65	61	64	10	70	64	44	4.4	hø	44	64	
50	# m	14	10	f 5 80	83	#1	40	81	41	41	0.1	4.1	41	H 1	H0	14	40	60	19
115	"/	40	#0	e I	al	42	-	e 5	47	49	45	45	85	45	6.5	47	45	el \$	44
100	47	40	45	4/	06	46	19.00	45	45	40	81	0/	87	84	**	45	01	# 7	01
10F	20	#0	#1	e i	44	4 5	44	45	45	49	49	60	Ho	86	45	40	85	45	91
44 fa.	20	CU, C	41.15	. USA															
50		9.5	51	30	5.5	51	50	50	20	60	60	41	00	42	50	25	34	35	20
15	50	30	500	5/	54	61	0 5	67	44 E	0.4	4/	66	07	64	6/	67	90	0.9	60
45	60	05	0.1	67	71	15	11	11	11	42	17	10	12	14	#3	75	75	10	71
00	51	12	20	14	61	411	45	45	60	101	104	10	10.	102	40	0.	107	104	10.
AN JOS	Se. 4	UAlew	ALA										-				0		•
0			51	49	50	5 5	50	50		51	56	50	56	50	35	52	52	52	
10	71	6/	17	61	14	71	71	10	10	71	10	70	10	70	17	69	75	14	60
45	1.	10	1.	16	11	11	11	En.	16	11	15	15	11	10	1	75	15	11	11
00	10	41	10	14	41	44	47	91	41	43	10	14	4.5	40	I m	18	40	# 5	4.5
0	15	15	16	15	10	10	40	14	"	19	11	10	10	11	11	11	7 H	14	14
A's Jul	62	0E#10	410	67	0.5	65	6.6	4.5	47										
56	11	15	15	15	14	11	14	11	10	40	7G	n I	A0 HO	15	40	78	40	40	14
15	42	10	40	81	01	0.0	67	(4.1	HO	44	41.5	46	44	4.5	et 5	43	# 5	45	47
¥4	45	et 5	41.0	85	45	40	44	01	m7	44	4/	45	45	89	85	45	45	45	49
00	40	40	41	#1 #0	v1	115	76	96	41	**	47	45	14	**	45	W 5	45	96	85
A - PI -	) ng 5	ULA,	H()'w()UI	145												.,,,			
0					5.	50	40	56			67	60	60	00	54	25	52	37	
15	75	00	47	75 81	7 m	45	41	45	11	# 1	41	44	51	81	14	/A	76	60	18
115	41 5	43	40	45	45	41.7	40	29 01	MA	41	m ?	44.86	88	25 15	66	-	47	P.B	84
36	47	40	es et	95	70	91	95	47	91	71	41	42	11	97	¥0	49.65	71	43	45
34	er 1	#1	6.7	ěi	4.5	40	67	20	01.5	41	41	46	Al .	n/	10	45	45	H6	45
44 5A1	VADU	4, MA	AWAS	45			54		1.2	200		10141							
50	15	15	10	75	14	14	17	13	11	50	11	e O	11	23	16	15	10	16	17
15	82	67	8 5	4.5	40	45	85	0.7	45	42	45	117	42	47	82	45	14.5	4.5	#5
<b>9</b> 5	12	17	45	46 V5	40	15	46	40	45	40	40	45	H5	41	d5 ≠1	45	46	15	46
00 0 <b>*•••</b>	101	101	104	105	105	106	105	105	105	44	Ve Ve	**	44	47	101	102	102	102	105
	4414					-	-	•				-		•		٠.		.,,,	• 0
50	50	514	50	58	42	41	41	• 1	514	52	21	61	37	55	51	411	415	44	5 15
75	65	54	67	65	62	60	60	60	59	71	/1	15	70	71	10	65	67	14	10
45	66		64	65	6.5	66	61	66	66	7.5	16	1 11	11	7.7	12	68	14	16	15
00	64	10	10	71	10	73	11	10	71 76	16 A2	87	82 48	81	80	16	15	19	# <b>1</b>	88
		62	62	65	67		61												00

<sup>•1</sup>QT--FIRST QUARTER DEC-JAN-FEB ••1HF--FIRST HALF YEAR DEC---MAY •••60M--AVLRAGE DATLY MAXIMUM

SURFACE RELIABILITY TEMPERATURE IN DEGREES FARRENHETT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

P4()8	DEC	JAV	FER	141+	MAK	APR	MAY	701	IHF••	JUN	JUL	AUG	SUT	SEP	1 20	NO 4	401	7HF	ANY
SANTIA	υυ, C	HILE	4.5	16	34	5.5	21	21	21	76	24	26	24	31	57	51	5.1	24	74
50	01	6.0	ort		05	60	55	54	04	6.8	48	51	49	54	54	65	59	54	50
75 8 <b>5</b>	75	10	15	40	12	10	60	61	11	54 58	33	58	50	01	10	10	66	67	68
75	81	80	40	нн	4.5	11	11	н0	40	60	61	10	64	7.5	14	85	81	18	45
100 A04+++	45	46 85	44	44	HQ	14	18	75	10	99	81	65	60	88	12	18	12	66	12
AVIO L		-							-	•	•		1.00	15.7			1.		
0	67	54	00	50	00	62	65	50	59	67	hø	6	64	08	00	61	0.1	61	50
50	F 6	15	10	76 HO	00	41	12	41	81	H0	80	45	40	80	85	14	10	40	85
45	42	61	67	82	H2	61	44		81	45	86	01	40	do	45	45	46	87	45
45	41	60	40	47	67	AB	86	He	66	49	40	41	91	40	4 4	90	91	91	10
100 W=+++	+5	84	85	75	46	45	86	115	45	40	98	84	9#	88	81	31	16	44	914
AO PAU	160. 1	HATTE																	
0	34	30	0.0	54	60	50	50	50	50	4.1			6.1	57	51	5.5		51	- 1
70	91	74	10	45	87	40	11	41	10	15	10	11	14	10	11	10	71	11	45
65	ds	81	66	110	85	+ 5	<b>#</b> 0		40	10	11	11	14	10	60	# 5	47	01	45
15	43	4.	43	V	47	91	0.7	42	44	45	4.0	65	40	64	41	90	40	40	14
130 D#•••	10%	107	45	107	106	41	11	10	107	15	10	71	10	10.1	10	102	11	75	107
10 10#	i	0 10	C 15																
0	01	6.4	0.6	01	68	68	05	45	05	6.1	50	50	36	67	00	65	6.7	50	26
10	41	67	00	92	8 S	49	43	45	41	61	7.4	10	76	81	60	- 14	81	0.5	45
65	45				116	6	45 %		40	67	n 1	45.1	67	0.7	61	67	67	et \$	45
75	45	40	*1	81	07	41	40	91	41	65	81	41	45	65	45	45	45	43	44
34***	44	40	46	115	dl	40	45	40	40	65	67	67	67	114				*5	8.
	0. TE	505L4	¥14																
0	55	-16	15	33	. 7	25	54	>0	-14	40	45	• 0	•0	50	51	55	51	0-0	-16
15	17	41	4.5	**	51	20	00	61	55	70	15	10	15	71	40	51	65	13	90
*5	-5			. 9	>>	08	00		0.0	10	E at	e O	7.0	15	. 5	54		**	15
190	91	51	00	56	10	71	64	60	F 1 tien	05	0.0	164	104	100	70	75	100	104	104
0****	61	57	. 2	40	51	43		6.1	>0	15	0.0	01	10	15	.0	50	0.2	10	60
EATTLE	. 445		. 5.	4.															
0	10	17		17	45	24	24	50	0	60	41	04	62	50	57	**	51	57	5.5
15			50	- 65	5.5	33	67	5.	50	67	10	0.7		0.5	34	55	67		. 5
">	· 05		35	57	30	50		4.	6.1	15	1.	15	7.1	64	6.1	51	. 1	1.	
00	01	00	20	5 d	61	10	61	15	41	40	45	48	40	45	80	14	76	76	40
3=***	65	+1		•5	25	50	0.5	50	57	10	15	1.	7.5	6 et	50	50	50		34
tout.	40011																		
	-12	-4	- 5	-12	5	75	16	5	-12	71	55	76	10	50	25	15	11	05	-12
10	19	52	17	še	10	71	67	50	52	17	6.3	11.5	47	Ze.	50	50	55	78	61
45	42	35	· I	41	5.1	.7	13		50	#0	43	49 /	65	10	0.01	5.5	7.1	45.7	15
136	511	6.1	01	01	17	45	10	10	71	99	90	**	41	H .	15	07	70	40	05
30	57	17	17	15	.,	67	12	60	• •		4.	01	45	10	41	55	0.5	14	.1
LVILLE	. 500	15																	
0	21	21	14	21	52	19	38	52	21	14	52	56	4.1	11	45	\$2	57	57	51
50	77	50	35	57	54	07	07	65	5/	95	47	90	90		75	95	11	45	10
45	61	50	0 5	67	0.4	17	91	10	7.1	₩9	0.5	**	4.	44	2 15	67	43	VU	0.5
100	17	/1	50	10	75	70	107	502	107	115	101	105	104	107	102	13	109	557	117
3	20	50	07	60	01	15	49	13	01	44	4.	VI.	V4	dv	Te.	.1	**		10
	1. (	194																	
3	1.	10	17	10	2.1	10	37	71	10	51	6.1	0.5	51	44	54	25	25	25	10
70	36	40	4.5	50	55	54	10	01	60	01	97	47	40	81	15	50	15	45	75
45	50	51	5.1	55	0.0	70	10	11		48.6	90	¥0	40	85	10		10	0.7	10
45	9.4	00	44	00	10	10	94	44	71	104	90	40	106	100	45	14	100	104	104
04444	55	10	45	49	33	00	11		57	45	YO	¥0	87	67	10	0.5	75	40	0.9
MA VYC%	11	****	. 141	L440															
9	21	12	10	12	14	24	20	18	12	35	•0	17	35	31	20	20	20	10	12
50	6.5	-1	61	67	52	56	51	50	54	54	00	01	96	50	57	52	57	35	60
M 5	50	>0	>0	51	36	50	62	. C	50	07	04	9.8	69	04	0.0	55	67	66	03
75	55	51	34	54	54	61	0 H	61	05	75	15	13	10	10	44	50	0.6	16	14
10 <i>1</i> 1	51	57	27	61	32	33	61	50	57	66	40	04	01	64	58	57	54	67	51
511&H J&H																			
0	41	57	46	57	46	55	61	46	37	67	/1	/1	67	6.4	04	34	34	34	57
50	75	70	17	66	77	16 H2	85	10	60	95	91	75	40	95	40	81	82	116 146	44
85	76	15	16	16	41	85	91	88	45	95	44	101	100	96	8.4	84	45	48	44
95	8.1	FH	H 1	45	90	105	10+	104	**	102	100	107	107	105	75	94	101	106	104
100	44	45	¥1	91	104				109	112	117	115	118	1115	104		155	118	118

<sup>•1</sup>QT--FINST QUANTER DEC-JAN-FEB •1MF--FINST HALF YEAR DEC---MAY ••40DM--AVENAGE DAILY 4AXIMU4 PAGE 210

SURFACE RELIABILITY TEMPERATURE IN DEGREES FARRENHEIT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

SHEMY	15.		SKA.	U. S.	•'.														
0	1 e	16	14	16	19	21	10	19	14	5 5	14	4.1	55	38	26	23		23	16
70	13	57	51 54	12	137	35	38	35	53	47	46	20		48	4.2	37			39
AS	30	16	16	16	35	10	40	50	37 54	46	51	52	50	51	40	40	40	25	
45	43	14	18	41	34	42		4.5	42	50	55	36	36	34	50		55	30	51
100 40#***	10	14	14	14	35	16	41	36	30	57	65	52	65	5H	94	14	96	67	61
SINGAP	one.	SIA.	SETT	EMENT										"	•		•	-	
0	64	60	00	66	101	70	70	61	0.0	70	10	64	64	60	64	69	69	69	60
50	81	.0	81	40	67	47	45	62	ěı	63	82		41	81	61	61	81	61	81
15	45	65	40	65	A5	HS	45	47	87	85	44	46	HS	84	de	83	84	46	65
45	68	84	49	69	40	VO	91	91	91	90	40	80	46	44	80	85	85	60	47
100	95	80	56	47	44	45	47	40	97	95	95	41	95 HB	01	91	47	95	45	W/
ino#Jt		02604		111	99	<b></b>				0.0			ne	124	91	•		6/	n /
0		-11	0	-11	1.3	76	20	2	-11	4.7	44	.7	42	30	25	12	12	12	-11
15	36	35	11	47	36	55	71	00	50	10	61	67	75	15	62	55	35	7.5	10
HS.			>1	>2	62	-	15	12	65	61	85	45		00	67	56	72	42	16
100	50	30	61	61	1.	7.	H	6 5	78	86		V 5	45		10	65	45	43	49
405	10	-0	15	63	55	07	15	00	54	89	105	105	105	101	47	71	105	105	105
501444	NTA.	INDON			"	•							•		• •	•••	•••		• •
0	64	70	10	64	6.9	05	67	47	67	>0	SA	61	50	62	64	. 7	62	50	50
15	41	61	61	81	81	61	81	45	85	85	41	70	10	110	43		42		e 1
65	46	05	45	60	do	46	46	0.7	47	65	63	65	46	4	81	87	46	45	**
15	*0	40	12.00	•0	84	48	40	90	91		# 0						42	91	43
405	44	43	**	95	84	94	45	44	95	41	01	61	07	*1	90	**	46	**	96
00/10.	<b>OUL 6</b>				-							•	•		•0	***	-	80	
0	-3	- 17	- •	-17	. 5	21	5.5	5	-17	.0		. 5	.0	29	20	15	15	1.5	-17
50	12	24	12	31	+2	52	60	51	61	45	70	. 9		62	5.5	. 5	25	00	50
45	.1	90	• ?	4.7	21	60	10	67	61	13	60	10	15	10	0.0	>0	0.5	15	**
65	55	51	3.5	50		12	7.0	11	73	0.2	07	61	47	0.5	73	0.5	14	76	17
100	17	54	. 6.5		76	45	70	01	**	10	45	42	40	75		76	45	99	
0404L5						••						~/	40	"	• 5	50	•3	71	•0
0	- 54				-47	- 55	-10	- 4/	- 6 6	21	20	20	21		-0	-15	-16	-10	-46
15	21	12	-2	3	. 5	15	12	17	10	• 1			. 5	30	2.	17	20	15	22
45	20	10	10	21	21	37	-1	57	10		31	52	50	. 5	30	26	37	67	24
45	10	50	10	54	52	-2	53		• 1	50	40	31	40	54	500	10	51	00	30
100	15			52	10	25	14	25	62	07	51	30	71		34	34	45	71	/1
				***		, -	, .	• •		••	31	30	•••	4.1	31	33	31	•0	24
SPLII.	21	LAVIO	19	17	21	5.5	.2	21	17	>0	50	50	50		17	76	26	20	17
75		• 5		16	51	34		54	25	12	In	13	14	13	.2	50	0.3	-	.0
45	33	51	33	56	5/		70	70	61	69	0/	40	0.5	41	71		13	16	/1
45	94	54	. 1	61	45	10	40	10	10	.7		el	*0	97	10	48	46	40	16
100	37	51	23	57	54	65	77	01	50	40	100	41	100	45		15	.5	160	100
fants r					,,,		••	•,	,•	40	•		**	•0	••	50	••	**	64
0			65	61	47		.5	62	61.		0.5	0.5	0.5	62			-2	•7	61
50	"	10	10	FH	10		7.8	74	7 0	10	1.4	7.	76	7.7	11	"	"	10	11
15	61	05	67	65	43	93	0.5	83	45	61	91	01	50	00	61	40	61	.0	63
45	44	<b>#</b> 0	40	40		44	414	44	46	.,	05	45	90	47	42	67	45	**	
00	95	911	97	10	46	75	91	44	16	- 1	62	93	95	3 5		*5	45	45	
									***			- 3	7.	45	46	45	•5	45	
0 00		-30	-77	-26	-14	- #	20	-16	-74	12	.0	10	52	76	10	0	0	0	-24
50	10	21	21	20	12	59		.0	34	5.	4.5	• 6	•0	52	**	15		51	-26
95	3.4	34	37	19	. 3	50	51	5.5						34	50		54		30
*5	40	47		***	52	55	61 70	5H	55	11	07	70	61	71	59	51	50	70	
00	52	51	30	54	54	"	4.	46	9.	91	47	v I	97		68	31	44	67	70
34	3 3	31	5.1	52	37	45	51	• •	30	45	76	46	57	54	44	16	48	50	48
*04E V.	-057	54L 14		48		45	•0	46	•3	36	4.6	57						4.	
50	70	13	13	11	10	05	50	••	69	30	36	56	34	50	. 7	.7	65	30	90
13	"	14	74	70	10	70	63	13	7.0	60	54	6.1	40	05	10	14	70		12
H5	91	HI	43	45	14	13	75	16	#1 93	69	67	71	0.5	64	76	74	15	/1	78
00	10/	116	104	114	10.5	41	46	101	116	40	18	42	10	97	41	H /	105	103	91
0#440	"	14	10	78	16	71	66	71	16	61	60	6 5	61	67	11	14	71	66	70
6H1 [1.	50C I	67 I	5.	00	61	67	44	4.4											
50	HO	61	81	40	41	61	14	40	40	16	61	61	61	67	67	40	67	61	61
15	9.5	44	8.6	H	H %	19 %	H 2	e \$	84	81	H 1	6.1	на	8.1	62	# 5	82	47	63
45	87	86	45	H6	45	85	63	85	66	81	43	42	63	67	64	84	84	63	85
00	91	95	45	75	¥2	45	91	88	45	40	85	40	90	18	86 H 2	47	87	90	89
	88	89	HY	89	HV	89	81	HH	66	86	86	40	86	86	87	88	#7		41

<sup>•10</sup>T--FIRST QUARIER OEC-JON-FEW
••1MF--FIRST HALF YEOR OEC---MAY
•••60M--6VERAGE DAILY MOXIMUM

SURFACE RELIABILITY TEMPERATURE IN DEGREES FARRENHETT FOR GIVEN PROBABILITIES OF NOT BEING EXCELOED

PROB	DEC	JAN	FLB	107+	MAR	APR	MAY	201	1HF * *	JUN	JUL	AUG	SQT	SEP	001	NOV	401	ZHF	ANN
TAIPEL		HOSA			-	7151								1		,404		• • • • • • • • • • • • • • • • • • • •	
0	35	51	12	12	35	46	50	15	52	60	61	66	60	56	51	54	54	34	52
50 75	63	66	54	66	11	10	16	10	65	86	84	65	# 3	81	14	69	85	44	72 81
45	7.5	94	70	71	1	79	45	82	18	88	¥0	44	*0	88	87	90	86	91	85
45	10	16	11	74	81	86	91	84	86	91	95	74	75	65	He	#5	65	91	97
100 ADM•••	94	66	65	67	70	11	81	11	72	40	101	100 V1	101	91	81	45	97 81	101	101
IAMPS,	FLA.	. v.	S. A.																
0	1.4	25	12	19	51	16	52	51	19	59	64	66	50	54	42	31	51	51	19
50	12	62	13	67	74	13	42	60	18	40 46	40	67	81	96	15	15	85	78 65	13
45	16	15	15	15	78	62	85		11.2	84	**	44	84	84	85	18	86	41	4/
45	61	10	61	81	86	de	40	90	H9	97	43	45	43	45	95	8 3	92	45	45
100 40H+++	13	11	15	12	75	81	80	41	10	9.5	90	40	9.6	96	45	14	96	46	81
		HADAG	SASCA																
30	10	70	52	52	51	01	.0	67	60	60	51	15	59	65	67	10	18	65	65
15	15	15	1.	15	14	7.1	67	15	13	66	6.5	05	05	64	14	10	14	10	13
45	45	87	11	65	81	75	17	/ b	14	15	17	15	15	80	66	85	84	10	11
00	¥1	w 1	¥0	νi	41	47	115	8/	91	60	60	85	45	92	45	**	45	¥5	95
Annes	40	14	14	74	74	10	7.5	10	10	64	6.0	10	64	14	80	41	10	14	10
-				10		4 (3	71		01	61	25				14	10	A E		1.
00	40	14	40	80	n0	41	9.1	60	90	60	61	6 P	40	81	64	40	40	40	40
15	6.5	42	es 5	9.5	65	m 5	0 \$	4.5	d 1	8.5	<b>(5 to</b>	70.6	66	45	4 5	4 5	0.5	4	44
75	45	4 5	45	45	86	45	44	44	45	67	45	95	44	85	86	01	A5	45	89
100	91	<b>₽</b>	00	74	91	71	42	43	V.	91	45	¥2	2.5	47	42	45	92	95	
A0****	M 6	93	86	86	30	46	m. P	96	86	84	61	m I	31	37	0/	46	6/	67	
GULCIG	ALPA.	H040	U4A5	4,5	6.5	51	55	* 5	-1	34	55	16	5.	54	52	.1	.1	.,	- 1
50	10	64	/ 1	10	74	75	10	15	12	10	11	10	11	15	12	71	13	13	72
15	10	10	11	76	61	es B	0.1	10.2	14	70	10	/ n	10	6.0	"	76	14	19	0.0
45		65	40	65	24	6 4	m 1	45	44	85	86	H 0	45	49	16	11	45	49	65
100	47	94	**	46	46	.1	96	w/	97	42	91	¥ 1	42	91	45	42	95	43	41
			11.5	*7	64	44	P.4	ed pa	0.3	46	6.	16.0	4.	8.5	6.2	41	43	- 1	**
0	10	-5		-5	16	20	5 4	16	-5	51	50	57	51	41	\$m	19	19	19	-5
50	42	10	<b>6.1</b>	•0		60	10	0.0	50	80	8.0	0.4	6.5	"	65	51	05	10	67
15	50	**	>0	50	67	12	6.1	11	6.5	40	42	71	71	n /	11	0.5	76	71	11
45	50	50	2.0	65	7.1	60	4 5	45	0.7	01	101	100	105	75	0.1	73	89	**	V5
00	51	45	59	65	65	71	45	/1	00	107	104	167	104	101	10	45	101	109	104
			-				2.0	- *				~ *	. •						
3	5 5	79	21	21	5.1	•0	50	5.5	21	50	0.5	63	56	6.1	41			••	21
30	61	51	50	50	62	40	14	6.0	6.5	14	4.2	0.5	41	41	11	64	10	14	7.1
15	10	00	70	10	71	40	9.1	ns	15	86	46	87	87	90	49	10	#4	#/	67
45	10	11	"	11	8.5	w 1	95	9.	41	96	¥1	V 5	44	**	95	46	45	40	+1
00	45	60	01	67	71	169	112	112	112	100	46	*0	90	107	106	19	107	104	112
MULT.	4114	I AND		10								-	= 1				10		
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50	- V	1	- 1.3	-10	-11	-1	23	16	- 1	10	61	56	5 (1)	21	16	15	16	21	12
45			7	5		1.1	52	12	13	42	07	44	45	52	21	17	31	50	25
45	16	17	1 .	16	1.6	21	5.7	2+	25	6.0	5.1	. 4	50	50	5.0	26	5.0	51	4.5
100	-1	16	10	- 5	- 2	37	24	5.2	3	91	50	51	-1	55	2.5	5 M	50	11	50
Q. VO.	JAPAS																		
0	20	17	10	17	11	50	16	21	17	41	55	00	.1	51	50	24	26	20	17
50	4.5	500	-0	•0	4.5	55	6.5	50	67	10	11	10	15	15	62	52	62	64	58
13	75	41	30	51	37	65	13	66	50	75	15		#2 #5	9.1	64	55	71	45	75
95	5.1	51	60	61	64	7.5	14	15	71	40	40	45	45	m /	14	69	el to	91	0.4
00	25	15	44	11	77	65	71	65	56	10	4.5	101	101	10	43	60	64	75	101
940410		4010-	LANA	104												201	14.		
0	-21	-26	-25	~26	-16		25	-16	-26	20		•0	29	14	16	-5	-5	-5	-26
13	27	21	15	50	50	52	62	56	5.5	12	"	75	61	60	51	51	44	57	05
45	4.5	30	54	61	44	54	66	62	55	"	of 8	14	81	7.1	61	51	67	78	10
100	51	41		50	61	<b>7</b> 0	16	13	71	85	41	16 05	71	92	10	54	14	40	65
100 104 • • •	5 5	50	10	51	57	>0	95	50	41	11	105	102	105	90	56	41	10	105	105
I TINIUA		et 04		IN I															
0	0.0	51	51	57	54	60	51	5	54	60	54	00	52	56	61	61	56	52	52
50	42	76 81	81	H2	81	79	40	84	77 A \$	40	85	/ V	85	85	80 84	14	19	74	85
	44	45	44	44	85	46	47	47	46	86	41	85	87	8.8	66	45	88	88	88
45																			95
45 95 100	44	84	84	49	91	91	45	45	91 97	97	97	49	41	101	41	49	93	101	101

<sup>•101--</sup>FIRST QUARTER DEC-JAN-FEB •1HF--FIRST HALF YEAR DEC---MAY ••ADM--AVERAGE DAILY MAXIMUM PAGE 212

		CE RE			TEMPER			DEGREES		JUN	JUL JUL	AUG	301	SEP	007	NOV	401	2HF	614
TRIPOL	OE C	JAN	FER	101-	MAR	APR	M&Y	201	IHF • •	JUN	JUL	-00	301	35.4					
50	33	59 54	50	35 36	89	# 5 65	69	59	5 5 6 1	50 79	60	62	50	10	50	42	42	42	55
15	65	60	62	62	1.5	12	76	74	69	81	89	#5	85	84	79 83	72	80	85	85
85 95	70	65	75	75	16	87	91	96	87	95	97	97	98	97	45	83	94	98	95
100 6DM+++	64	61	65	65	67	105	104	100	67	91	85	86	89	1113	80	75	79	82	74
0	TUNI 50	10	52	50	54	11		54	50	48	50	52	4.6	52	•5	50	50	50	30
50	52	51	55	52	65	64	75	67	65	81	87	80	78	89	15	44	17	85	75
45	95	59	62	62	16	15	11	85	70	85	97	105	101	87	79	70	93	100	95
00	81	77	61	84	91	104	104	104	104	109	114	117	118	111	100	*0	111	83	116
SHU-1	6, 6H	554111 74	77	21	21	21				-1			-6	17	26	21	17	-6	-6
0			>0		47	• 1	50	• 1	45	35	52	55	5.5	59		45	.2	58	53
45	57	60	50	50	52		**	50	62	*1	41	*!	**	17	52	25	55	55	58
00		45	10	45	62	33	57	7.	72 05	51	55	50	52	52	70	10	70	62	45
04***	50	57	>0	57	55		• 5	**	5.5	50	5.	43	•0	**	52	54	51	45	
0	4	. C.	•	2	15	21	5.5	15	. 2	55	•0	50	55	50	21	10	10	10	3
50 75	50	5/	50	56	51	35	61	50	54	68	70	10	70	57	50	>2	40	**	20
45	50	35	34	55	54	30	72	62	50	71	40	75	75	1	61	56	75	61	10
00	00	50	41	61	50	14	0.5	45	50	42	11	- 42	45	45	11	74	57	02	97
CHICE.				20	21	15		27	20	••	52	35	40	44	50	20	24	20	20
>0	3.	54	20	50	44	50		50	46	7.1	15	15	7.5	70	50	4.9	59		57
75		.3	**	44	35	9.5	44	67	•0	77	45	10	40	76	67	50	*1	15	*
95	54	50	55	55	70	-0	64	14	44	45	**	* 5	**	4.5	12	40	76	**	41
04***	**	. 1	**	45	34	45	71	. 5	54	10	62	4.2	41	76	65	54	**	75	45
9		-4	-15	-14	- 5	10	21	5	- 19	5.	• •	+2	50	51	10	•			-14
75	50	50	55	52	50	37	56	61	50	71	15	72	75	54	50	•0	50	70	**
95	33	3.1	57	50	94	70	70	**	41	05	97	7.	76	70	42	25	15	75	10
0	57	42	50	30	13	57	97	92		**	75	75	75	**	82	71	55	**	**
	11/4.	5004						57	26	30		57	56	50	•2	50	30	50	26
3	30	61	50	20	37	40	55	10	71	*0	+5		40	67		75		45	76
/5 05	75	75	15	15	0.0	40	100	91	45	102	101	102	102	**	47	45	91	101	*1
45 00	102	25	100	100	116	107	104	104	104	110	100	104	110	104	105	115	105	109	10+
04***	74	15	79	77		94	104	*7	57	104	100	105	194	101	96	67		100	**
0	51440.	54	52	52	55	54	40	5.5	52	. 5	41	0.5	4.5	0.5	0.5	54	50	50	52
50 75	7.	15	72	75	12	15	15	75	76	00	01	45	70	76	41	75	01	01	00
45	14	76	01	45	76	7.0	8.5	0.5	40	61	65	. 5	62	85	67	.0	6.5	65	62
00	70	70	76	**	*;;	70	07	07	97	61	46	05	00	95	40	**	40	40	+0
44540	. POL	40					14												- * *
50	20	-53	-0	-55	55	34	50	-	- 22	65	**	4	67	57	17	50		55	-33
75	50	50	50	56	**	25	65	50	51	4.6	12	71	15	6.7	55	**		64	94
95 00	51	50		50	57	75	70	76	72	70	# 5 # 5	45	**	75	**	55	75	**	61
Curre	\$5	\$0	57	51	1	34	.,	50	.;	12	15	15	75	45	54	•0	55		55
0	6104. -15	0.C.	- 15	-15		15	55		-15	• •	51		• 5	50	26	11	11	!!	-15
75	56	57	51	50	57	65	75	55	61	4.5	85	0.5	45	70	50	58	71	40	75
*>	55	65	50	50	62	*0	05	7.5	80	92	44	**	45	43	72	67	76	95	80
00	14	•0	40	84	93 55	65	16	07	97	102	104	106	106	104	86	57	100	106	106
ELCIN	G104.	46 H	FENLA	NO 58	sv	50	12	52	52	30	29	29	29	51	50	56	51	29	29
>0	61	65	65	67	61	31	55	51	59	50			54	57	50	57	54	51	35
85	66	71	71	71	66	64	40	65	10	57	57	33	56	59	63	45 71		61	66 75
			P 44				4 4												
95 100 60Msse	85	85	88	78	81	68	71	81	88	67 55	59	66	61 69 54	43 69 57	75 60	81	81 60	81	86

\*10T--FIGST QUERTEG DEC-JAN-FEG \*\*IHF--FIRST HALF YEAR DEC---MAY \*\*\*60M--6YERGGE DAILY MAXIMUM

SURFACE RELIABILITY TEMPERATURE IN DEGREES FAHRENHEIT FOR GIVEN PROBABILITIES OF NOT BEING EXCEEDED

				FEE	101	· MAI	R APR	I MA	501	I HF • •	JUA	JUL	AUG	301	SEF	) OC	NOV	401	2HF	ANN
HEST I	t NO	5	AMA	S 4.5	41			- 11							1					
50	-	5	75	71		1 75				74	67	67		67	65			49		41
15	•		40	"		18		81	87	81	7.	85	86	18	87			19		16
45	8		42	10		81				85	16	87	86	84	87			85	85	84
100	đ		89	67		84				88	81	90	40	88	1 00			90	31	90
*0H***			"	11	18	14		65	45	77	94	94	**	**	97	97	49	97	94	94
ot SI P	ALM	nEA	Cm.	FLO	. use						-			00			01	93	86	85
0	5		11	.10	51	1 1/		51	11	41	64	68	85	64	65	51			600	
15	0	,	6/	68	98	10	14	"	14	71	81	42	87	92	91	74	10	36	16	11
45	80		15	13	10	7A	41	A 5	95	80	85	86	86	86	85	84	80	de	84	15
*5	81		3 5	44	44	86	44	40	90	89	41	88	44	4.0	81	46	47	48	77	88
100	90		l v	40	49	97	76	46	90	46	94	101	43	101	96	30	47	25	91	95
4 () A + + +	"		3	"	16	14	41	86	82	19	40	90	+0	93	86	85	40	40	101	45
milte			440															•••		.,
30	-50		3	-51	-62	- 10	-14	10	- 56	-67	50	52	24	24	15	-6	-61	-41	-61	-0/
15	- 17		0	12	21	32	57	46	5.5	IV	55	00	50	54	40	15	15	12	45	57
85	21		6	24	21	15	45	5.5	50	10	62	/-	81	61	50		21		64	51
45	5 5			54	51	9.0	52	64	64	00	65	# 5	12	71	54	44	31	55	10	61
00	4/			50	50	54	50	80	40	80	84	91	d'a	VI.	7.	50	51	40	81	15
				1.6	1.5	51	41	51	• 5	24	66	01		00	33	41	21	19	52	91
1 40+06	50	10.		45	CA SH															
50	1.	7		12	73	10	50	90	24	24	51	21	25	15	51	55	5 5	5.1	25	25
15	42		_	10	91	11	75	0.0	10	. 7.	50	30	0.0	5/		13	12		9.5	
65	45	6		41	45	80	10	/1	10	92	01	62	64	65	75	40	60	10	11	1.
00	*1			0/	¥0	60	91	10	95	44	12	10	"	15	61	85	49	67	"	40
0=	60	41		- 5	47	80	11	12	**	- 11	12	"	45	45	91	+ 5	40	94	40	3/
							**		16	40 .	68	66	* \$	10	"		64	67	10	70
0	-30	- 4	044		ACAPL	- 19	- 19	11	- te	- 6.4										
10		- 1		2	2	10	50	52	55	-54	21	35	10	21	17	- 5		- 50	- 10	-50
45	20			1.	15	10	25	61	5.5	5 et	12	10	7.3	15	30	55	15	57	71	55
15	30	- 19		51	22	57	50		61	•1	"	81	11	61	94	50	41	44	70	5/
20	55			.,	55	52	70	100	100	100	101	91	es #	45	# 1		50	10	42	80
****	15			17	H	21	40	05		24	74	100	76	106	99	51	50	• •	100	104
110-11	SIF.		<b>.</b>		-												,0	••	95	••
3 4	- > >	- 60	- (	10 B	-00	- 65	- 5.5		- 45	-00	26	5.5	5.0	24	14	-0	- 41			
10	-14	-10		15	-14	- 1	10	-0	10	2	5.5	0.1	511	57	4.0	51	-10	20	- 54	-00
5	- 4	- 5		0		10	30	30	55	1.0	50	6/	99	66	5.5	• 1	17	4.5	50	42
5	14			9	16	25	• 5	24	51	24	10	71	4.7	6.0	51	45	22		05	50
0	11	21		1	37	5 00	34	10	10	14	41	40	1.	15	19	55	51	. 2	16	65
4000	- 9	- 10			-1	1 C	24	**	36	TT.	61	64		65	52	10	14	10	50	13
410.		0554																	-	
0	50	5 8		•	- 6	13	5.0	10	21	- 6	.1	5.5	40	./	50	20	1.0	16	10	
	• 6	19		is .	55	52	55	61	55	**		/ 1		64	0.1	5.5	4.5	52	41	52
5		. 7			40	>0	41	70	61	61	17	15		15	01	60		61	71	9.6
	33	50			30	05	0.0	11	1.	71	81	10		7.6	10	0.5	57		13	71
	61	0.5			60	1.	10	-	40	66	VI	10		75	41	11	50	16		0.1
	47	\$-0		7	•0	5.5	01	10	6.1	51	10	40		14	90	60	40	50	**	63
		11 -1			- 1															
	5 %	-11	- 1		11	- 65	23	11		- 11	30	41		5/	10	12	1.5	11	1.5	-11
-	4.6	30			15	52	50	50	50	47	6.4	6/		90	4.1	51	42	51	34	50
	./	4.0	,			50	67	13	51	50	11	14		/-	94	50	49	6 I	10	03
	20	20	5		57	. 5	13	14	11	1.	95			10	75	71		66	15	12
	50	37	(5		61	15	41	65	85	11				32	75	45		10	102	05
	20	3.0		3	<b>₩</b> 0	31	60	64	50	50	14			10	10	54		50	147	102

<sup>\*1</sup> QT--FIRST QUARTER DEC-JAN-FEB \*\*HF--FIRST HALF YEAR DEC---MY \*\*\*ADM---AVERAGE DAILY MAXIMUM PAGE 214

## TABLE 7

LIST OF AIRPORTS WITH GEOGRAPHICAL COORDINATES, ELEVATION, AND LENGTH OF LONGEST RUNWAY

TABLE 7. AIRPORTS

CITY - COUNTRY	AERODROME	CODE	LAT.	LONG.	ELEV.	RUNWAY ft.
Accra, Ghana	Accra	400	5 361	0.101		
Addis Ababa, Ethiopia	Haile Selassie	ACC	5.36N	0.10W	221	9600
Adelaide, Australia	Adelaide	ADD	9.000	38.44E	7743	5670
Aden, Aden-Prot	Khormaksar	ADL	34.575	138.32E	12	6850
Algiers, Algeria	Maison Blanche	ADE	12.50N	45.02E	10	8386
Alice Springs, Australia	narson branche	ALG	36.42N	3.13E	82	7972
Aliahabad, India	Allahabad	ASP	23.485	133.53\$	212	
Amman, Jordan	Amman	AMM	25.26N	81.44E	319	6000
Amsterdam, Netherlands	Schiphol	AMM	31.58N	35.59E	2550	8000
Anchorage, Alaska	Anchorage International	AMS	52.19N	4.47E	13	10663
Ankara, Turkey	Esenboga	ANC	61.10N	150.00	124	10600
Antigua Island, B. W. I.	Cooildge	ANK	40.08N	33.00E	3122	12310
Aruba, N. W. I.	Coorrage	ANU	17.09N	61.47W	62	6900
Asuncion, Paraguay	Procidente Standard	AUA	12.30N	70.01W		
Athens, Greece	Presidente Stroessnor	ASU	25.158	57.31W	330	9000
Atlanta, Ga., U.S.A.	Athens Central	ATH	37.54N	23.44E	90	8333
Auckland, New Zealand	Atlanta Municipal	ATL	33.39N	84.26W	1024	7800
Auckland, New Zealand	Whenuapai	AKL	36.475	174.38E	100	6590
Baghdad, Iraq	Baghdad West	BGW	33.19N	44.22E	112	7054
Bahrein I., Persian Gulf	Bahrein/Muharraq	BAH	26.16N	50.38E	6	7500
Baltimore, Md., U.S.A.	Friendship Intil	BAL	39.10N	76.40W	146	3400
Bangaiore, India		BLR	12.57N	77.40E	2937	6900
Bangkok, Thailand	Don Muang	BKK	13.54N	100.36E	12	
Barbados, B. W. I.	Barbadoes/Seaweli	BGI	13.04N	59.29W	165	9840
Barcelona, Spain	Barcelona	BCN	41.18N	2.04E		9000
Barranquilia, Colombia	Soledad	BAQ	10.54N	74.47W	13	8415
Basle, Switzerland	Mulhouse	BSL	47.35N	7.32E	47 886	5200
Basrah, Iraq	Margil	BSR	30.34N	47.47E	8	7775
Beirut, Lebanon	Beirut Int'i	BEY	33.50N	35.29E	85	6000
Belem, Brazii	Val de Cans	BEL	1.235	48.28W	46	10663
Belfast, N. Ireland	Nutts Corner	BFS	54.38N	6.09W		6000
Belgrade, Yugoslavla	Zemun	BEG	44.49N	20.24E	359	6014
Beilze, British Honduras	Stanley	BZE	17.32N	88.18W	243	5249
Bengasi, Libya	Benina	B EN	32.06N	20.16E	16	5000
Bergen, Norway	Flesland	BGO	60.18N	5.13E	425	6600
Berlin, Germany	Tempelhof Alr Base	BER	52.28N	13.24E	165	8038
Bermuda, Bermuda	Kindley AFB	BDA	32.21N	64.41W	163	5267
Biak, Australia	•	BIK	1.125	_	11	9710
Bimini, Bahamas	•		25.42N	136.07E	37	11700
31ed, Yugoslavla	Lesce	BLY	46.22N	79.17W	1654	1.000
Bloem Fontein, Africa	Tempe	BFN	29.065	14.11E	1654	4900
Bogota, Colombia	El Dorado	BOG	4.42N	26.11E	4680	10000
Bombay, Indla	Santa Cruz	BOM	19.05N	74.09W	8355	12500
Bordeaux, France	Merignac	BOD		72.52E	35	10500
Boston, Mass., U.S.A.	Logan Int'l	BOS	44.50N 42.22N	0.43W	161	7874
Brasilia, Brazil	Brasilia	BSB		71.00W	19	10023
Brisbane, Australia	Brisbane	BNE	15.515	47.56W	3474	10500
Brownsviile, Tex., U.S.A.	Harlingen AFB	HRL	27.25S	153.05E	7	7760
Brusseis, Belglum	Brussels National	BRU	26.13N	97.39W	35	6000
	555615 NG (101161	DNU	50.54N	4.29E	180	11936

CITY - COUNTRY	AERODROME	CODE	LAT.	LONG.	ELEV.	RUNWAY ft.
Bucharest, Romania	Baneasa	BUH	44.30N	26.05E	297	7218
Budapest, Hungary	Ferihegy	BUD	47.26N	19.14E	430	8200
Buenos Aires, Argentina	Ezeiza	BUE	34.485	58.38W	64	10800
Butterworth, Fed. of Malaya	Butterworth	BWH	5.88N	100.24E	10	8000
nataya						
Cairo, Egypt	Cairo International	CAI	30.08N	21 21.5	211	10007
Calcutta, India	Dum Dum	CCU	22.38N	31.24E 88.38N	311	10827
Calgary, Alberta, Canada	Calgary	YYC	51.06N	114.01W	18	7700
Campeche, Mexico	30.gc. /	CPE	19.50N	90.31W	3557	8700
Cananea, Mexico		CNA	30.59N	110.16W		£200
Canton Island, Phoenix Is.	Canton	CAN	2.465	171.43W	0	5200 6000
Capetown, U. So. Africa	D. F. Malan	CPT	33.58\$	18.36E	9 151	6900
Caracas, Venezuela	Maiquetia	ccs	10.37N	66.59W	230	9800
Cartagena, Colombia		CTG	10.28N	75.31W	230	9000
Carupano, Venezuela		CUP	10.39N	63.14W		
Casablanca, Morocco	Cazes	CAS	33.33N	7.40W	203	6004
Cherokee Sound, Bahamas	A-2-1-2	• • • • • • • • • • • • • • • • • • • •	26.17N	77.04W	205	0004
Chicago, Illinois, U.S.A.	O'Hare Chicago Int'l	OP.D	41.59N	87.54W	667	11600
Chitose, Japan	Chitose AB		42.48N	141.40E	82	9000
Chittagong, Pakistan		CGP	22.16N	91.49E	12	6000
Christchurch, New Zealand	Christchurch	CHC	43.295	172.32E	113	6600
Chung King, China		CKG	29.32N	106.35E	,	0000
Churchill, Manitoba,	Churchill	YYQ	58.45N	94.04W	100	11200
Canada		•		<b>3</b>		11200
Ciudad Del Carmen, Mexico		CME	18.39N	91.49W		
Cleveland, Ohio, U.S.A.	Cleveland-Hopkins	CLE	41.25N	81.51W	789	9000
Cocos Island, Indian Ocean		CCK	12.115	96.50E	11	8000
Cold Bay, Alaska	Cold Bay	CDB	55.13N	162.44W	94	7300
Cologne, West Germany	Koin-Bonn	CGN	50.52N	7.09E	300	12467
Colombo, Ceylon	Ratmalana	CMB	6.49N	79.53E	22	6000
Conakry, Fr. W. Africa	Conakry	CKY	9.34N	13.37W	85	5577
Copenhagen, Denmark	Kastrup	CPH	55.37N	12.39E	16	10827
Cordoba, Argentina	Cordoba	COR	31.198	64.134	1588	10500
Curacao, N. W. I.		CUR	12.12N	68.58W		
Cumana, Venezuela		CUM	10.39N	64.11W		
Curitiba, Brazil	Afonso Pena	CWB	25.315	49.11W	2986	5905
Dacca, Pakistan	Tezgaon	DAC	23.46N	90.23E	24	7500
Dakar, Senegal	Yof	DKR	14.44N	17.29W	89	7907
Dallas, Texas, U.S.A.	Love Field	DAL	32.51N	96.51W	485	7750
Damascus, Syria, U.R.A.	Damascus Int'i	DAM	33.29N	36.14E	2405	8235
Darwin, Australia	Darwin	DRW	12.255	130.52E	86	9570
Denver, Colorado, U.S.A.	Stapleton Airfield	DEN	39.46N	104.53W	5331	10010
Detroit, Mich., U.S.A.	Detroit Metropolitan	YIP	42.14N	83.21W	639	10500
Dhahran, Saudi Arabla	Dhahran	DHA	26.17N	50.10E	78	10100
Djakarta, Indonesia	Kemajoran	JKT	6.098	106.51E	16	8120
Doha Qatar, Saudi Arabia		DOH	25.16N	51.34E	33	6300
				-		

CITY-COUNTRY	AERODROME	CODE	LAT.	LONG.	ELEV.	RUNWAY ft.
Dubrovnik, Yugoslavla	Gruda	DBV	42.33N	18.17E		
Durban, U. of So. Africa	Louis Botha	DUR	29.585	30.57E	25	6800
Dusseldorf, W. Germany	Dusseldorf	DUS	51.17N	6.45E	133	8382
East London, U. So. Africa	Collondale	ELS	33.035	27.49E	425	6350
Edmonton, Alberta, Canada	Edmonton Municipal	YXD	53.34N	113.31W	2200	5868
El Adem, Tobruk, Llbya	E1 Adem	ELE	31.52N	23.55E	510	6546
El Paso, Texas, U.S.A.	El Paso Intil	ELP	31.48N	106.23W	3939	11000
Entebbe, Uganda	Entebbe	EBB	. 03N	32.27E	3789	8957
Fortaleza, Brazll		FOR	3.475	38.32W		
Ft. de France, Martinque		FDF	14.36N	61.05W		
Ft. Lauderdale, Fla., U.S.A.	Broward Co. Int'l	FLL	26.04N	80.10W	10	6500
Frankfurt, West Germany	Rhein/Main	FRA	50.02N	8.34E	368	12795
Freetown, Slerre Leone	Freetown-Lungi	FNA	8.37N	13.12W	82	6500
Frobisher Bay, N.W.T., Canada	Frobisher	YFB	63.45N	68.33W	110	9000
Fukuoka, Japan	Itazuke AB	FUK	33.35N	130.27E	30	10000
Gander, Canada	Gander	YQX	48.57N	54.34W	496	8200
Gaya, Indla	Gaya		24.44N	84.56E	362	6000
Geneva, Switzerland	Cointrin	GVA	46.14N	6.06E	1411	12795
Georgetown, Br. Gulana	Atkinson	GEO	6.30N	58.15W	95	7430
Gibraltar, Gibraltar	Gibraltar	GIB	36.09N	5.21W	15	6000
Glasgow, Scotland	Renfrew	GLA	55.51N	4.16W	35	5789
Goose Bay, Nfld, Canada	Goose	YYR	53.19N	60.25W	150	11000
Grand Cayman, B.W.I.		GCM	19.17N	81.22W		
Grenada, B.W.I.	Pearls	GND	12.09N	61.36W	30	5300
Guam, S. W. Pacific	Agana NAS	GUM!	13.29N	144.47E	280	10000
Guatemala City, Guatemala	La Aurora	GUA	14.34N	90.32W	4958	9800
Guayaquii, Equador	Simon Bolivar	GYE	2.105	79.52W	13	8000
Hamburg, Germany	Hamburg	HAM	53.38N	9.59E	42	10006
Havana, Cuba	Jose Martl Int'l	HAV	23.01N	82.24W	210	10500
Helsinki, Finland	Helsinki	HEL	60.19N	24.58E	167	6562
Hong Kong, Hong Kong	Hong Kong Int <sup>1</sup> 1	HKG	22.20N	114.12E	15	8350
Honolulu, Hawall, U.S.A.	Honolulu Intil	HNL	21.20N	157.56W	13	12300
Houston, Texas, U.S.A.	Houston Intil	HOU	29.39N	95.16W	50	7600
Hyderabad, Indla		HYD	17.33	78.30E	2020	6900
Istanbul, Turkey	Yesllkoy	IST	40.58N	28.49E	88	7548
Jidda, Saudl Arabla		JED	21.30N	39.12E		
Johannesburg, U. S. Africa	Jan Smuts	JNB	26.085	28.15E	5559	14500
Johnston Island, Pacific Ocean	Johnston Island AFB	JON	16.44N	169.31W	7	5900

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CITY-COUNTRY	<u>AERODROME</u>	CODE	LAT.	LONG.	ELEV.	RUNWAY ft.
Kano, Nigeria	Kano	KAN	12.03N	8.31E	1563	8610
Kansas City, Mo., U.S.A.	Kansas City	MKC	39.07N	94.36W	758	7000
Karachi, Pakistan	Karachi	KHI	24.54N	67.09E	75	10500
Keflavik, Iceland	Keflavik	KEF	63.59N	22.36W	169	10000
Ketchikan, Alaska, U.S.A.	Annette Island	KTN	55.02N	131.34W	119	7500
Khartoum, Sudan	Khartoum Clvil	KRT	15.36N	32.34E	1253	7050
Kimberley, U. So. Africa	Kimberley	KIM	28.485	24.46E	3950	7900
Kingston, Jamaica	Palisadoes	KIN	17.56N	76.47W	10	7600
Kisumu, Kenya	Kisumu	KIS	.058	34.44E	3795	5950
Kodiak, Alaska, U.S.A.	NS Kodiak	NHB	57.45N	152.30W	77	7500
Kuala Lumpur, Malaya		KUL	3.07N	101.42E	ıíí	6200
Kuwait, Kuwait		KWI	29.21N	48.00E	57	5400
Kwajaleln, Marshail Is.	Kwajalein NAS	KWA	8.43N	167.44E	7	6750
Lagos, Nigeria	Lagos	Los	6.35N	2 205	120	7505
Lahore, Pakistan	Walton	LHE	31.32N	3.20E 74.24E	132	7595
Lajes, Azores	Lajes	LJZ	38.45N	27.06W	700	6300
Las Palmas, Canary Is.	Las Palmas	LPA	27.56N		180	10800
Las Piedras, Venezuela		LSP	11.44N	15.23W	46	5791
La Paz, Bolivia	El Alto	LPB	16.305	70.12W	1222	11100
Leningrad, U.S.S.R.	Leningrad	LED	59.57N	68.11W	13398	11100
Leopoldville, Belgian	Leopoldville/N'Doio	L EO	4.198	30.18E	-63	(-(-
Congo	Leopoldville/N'Djili	LLU	4.235	15.19E	51	6560
Librevilie, Fr. Africa	Libreville	LBV	.27N	15.26E	1014	15420
Lima, Peru	Limatamho	LIM	12.065	9.25E	39	5741
Lisbon, Portugal	Lisbon	LIS	38.46N	77.01W	483	5900
Livingstone, N. Rhodesia	Livingstone	LVI	17.495	9.08W	361	7874
Ljubljana, Yugoslavia	Ljubljana	μū	46.04N	25.49E	3230	7500
London, England	Heathrow	LON	51.28N	14.34E	951	3600
Los Angeles, Calif., U.S.A.		LAX	33.56N	.27W 118.24W	80	11000
Lourenco Marques,	Mavalano	LUH	25.55\$		126	12000
Mozambique	11110		27.773	32.34E	128	7380
Luanda, Angola	Presidente Craveiro Lope	ZLAD	8.515	13.14E	243	7382
Lusaka, N. Rhodesia	Lusaka	LUN	15.258	28.20E	4208	6660
Madras, India	Madras (St. Thomas Mt.)	MAA	12 504	90 105		
Madrid, Spain	Barajas	MAD	12.59N	80.10E	48	6000
Makassar, Indonesia	-0.0,03	MSR	40.28N	3.34W	1985	10006
Maita, Malta	Luqa	MLA	5.045	119.33E	46	5100
Managua, Nicaragua		MGA	35.51N	14.29E	297	7800
Manaos, Brazil	Ponta Pelada	MAO	12.07N	86.11W		
Mangalore, India		100	3.095	59.59W	272	6500
Manila, Phillipines	Manila Int'l	MNL	12.59N	74.54E	344	4000
Maracaibo, Venezuela		MAR	14.31N	121.01E	67	7900
Marseilles, France	Marignane	MRS	10.40N	71.39W		00-0
Mauritius, Ind. Ocean	Makebourg-Plaisance	MRU	43.25N 20.26S	5.13E	66	8858
Mazatlan, Mexico		MZT	23.14N	57.41E	165	6958
Medan, Indonesia	Polonia	MES	3.34N	106.25W 98.41E	92	FF04
	- · - · · · •		7.711	70.412	82	5500

CITY - COUNTRY	AERODROME	CODE		1.000		
	1	CODE	LAT.	LONG.	ELEV. ft.	RUNWAY ft.
Meibourne, Australia	Meibourne	MEB	37.445	144.54E	260	6100
Menado, Indonesia	4. 0	MDC		124.55E	264	492 i
Mendoza, Argentina	Ei Piumerilio	MDZ		68.47N	2313	8400
Merida, Mexico		MID		89.41W	-5.5	0400
Mexico City, Mexico	Central	MEX	19.26N	99.05W	7340	i 1700
Miami, Florida, U.S.A.	Miami Int'i	MIA	25.48N	80.17W	9	10500
Midway, Pacific Ocean	Sand Field	MDY	28.12N	177.23W	- 13	7900
Milan, Italy	Malpensa	MIL	45.38N	8.43E	767	12844
Minneapoiis,	Minneapoiis/St. P.	aui MSP	44.53N	93.13W	840	8200
Minn., U.S.A.	International			JJ • • · J#	040	0200
Monrovia, Liberia	Robertsfield	MLW	6.15N	10.21W	24	6988
Montego Bay, Jamaica	Montego Bay	MJB	18.30N	77.55W	23	
Monterrey, Mexico		MTY	25.52N	100.14W	,	7100
Montevideo, Uruguay	Carrasco	CSO	34.505	56.02W	86	7100
Montreai, Quebec, Canada	Montreai Int'i	YUL	45.28N	73.45W		7100
Moscow, U.S.S.R.	Sheremetievo	MOW	55.58N	37.25E	117	9600
Mount Isa, Australia		ISA	20.405	139:28E	623	11100
Mukden, Manchuria		MUK	41.45N	123.29E		
Munich, W. Germany	Munich	MUC	48.08N	11.42E	1732	8530
Nagoya, Japan	Kamaki AFB	NGO	35.15N	136.55E	61	
Nagpur, India		NAG	21.05N	79.03E	51	9000
Nairobi, Kenya	Nairobi	NBO	1.195	36.56E	1012	6400
Nandi, Fiji Islands	Nandi	NAN	17.455		5327	10000
Nanking, China		NKG	32.07N	177.27E 118.47E	63	10500
Napies, Italy	Capodichino	NAP	40.53N		200	0
Nassau, Bahamas, B.W.I.	Nassau Int'l.	NAS	25.03N	14.17E	289	7218
Natai, Brazil	Parnamirim	NAT	5.558	77.28W	10	8300
New Deihi, India	Palam	NDH	28.34N	35.15W	161	7400
New Orieans, La., U.S.A.	Moisant Int'l	MSY	29.50N	77.07E	761	7500
New York, N. Y., U.S.A.	New York Int'l	IDL	40.38N	90.01W	.3	8000
	(Idlewiid)		40. JON	73.47W	12	14600
Nicosia, Cyprus	Nicosia	NCY	35.09N	22 16 5	701	0000
Nogaies, Mexico			31.13N	33.16E	734	6000
Nome, Alaska, U.S.A.	Nome (FAA)	OME	64.31N	110.59W	100	
Noumea, N. Caiedonia		NOU	22.165	165.26W	37	5400
			22.103	166.26E		
Okinawa, Ryuyku Is.	Kadena AB	OKA	26.21N	127 665		
Osaka, Japan	Osaka Int'l	OSA	34.47N	127.46E	142	12100
Oslo, Norway	Fornebu	OSL	59.54N	135.26E	50	6000
Ottawa, Ontario, Canada	Ottawa	YOW	45.19N	10.38E	56	5741
		10#	45.134	75.40W	374	8800
Padang, Indonesia		PDG	0.53\$	100.21E	19	4900
Panama, Panama	Tocumen National	PTY	9.05N	79.23W	135	8800
Paris, France	Le Bourget	PAR	48.58N	2.27E	217	9842
Peiping, China		PEP	39.36N	116.24E	41/	<del>304</del> 2
Perth, Australia	Perth	PER	31.565	115.58E	61	6000
Peshawar, Pakistan		PEW	34.00N		51	6920
			J-110011	/1.315	1150	9000

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CITY - COUNTRY	AERODROME	CODE	LAT.	LONG.	ELEV.	RUNWA'	<u>'</u>
Philadelphia, Pa., U.S.A. Phoenix, Ariz., U.S.A.		PHL	39.53N	75.14W	14	9500	
Pietersburg, U. So. Afric	Phoenix-Muni.	PHX	33.26N	112.01W	1122	8800	
Pisa, Italy	a rietersburg		23.515	29.27E	4074	8823	
Pittsburg, Pa., U.S.A.	San Giusto	PSA	43.41N	10.24E	8	8500	
Fointe a Pitre, Guadaloup	Allegheny County	PIT	40.21N	79.56W	1252	5500	
Poriamar, Venezuela	е	PTP	16.16N	61.32W			
Port au Prince, Haiti		PMU	11.01N	63.54W	•		
Port Elizabeth, U. of	Decis Essential	PAP	18.34N	72.20W			
So. Africa	Port Eilzabeth	PLZ	33.598	25.37E	227	6500	
Port Harcourt, Nigeria	Port Harcourt	PHC	4.51N	7.01E	58	6000	
Port Moresby, N. Guinea		POH	9.305	147.07E	50	0000	
Porto Alegre, Brazil	Saigado Filho	POA	30.00S	51.11W	10	6600	
Port of Spain, Trinidad	Piarco Field	POS	10.36N	61.21W	44	6600	
Prague, Czechosiovakia	Ruzyne	PRG	50.06N	14.17E	1247	9500	
Prestwick, Scotland	Prestwick	PIK	55.30N	4.35W		7546	
Puerto Barrios, Guatemaia		PBR	15.44N	88.35W	64	9800	
Puerto Cabello, Venezuela		PBL	10.29N	68.04W			
Quito, Ecuador	Mariscai Sucre	UIO	.08s	78.29W	9218	10200	
Rangoon, Burma	Mingaladan	DON	16 714	-4			
Rawaipindi, Pakistan	yaradan	RGN	16.54N	96.08E	109	8100	
Recife, Brazil	Guararapes	RWP	33.37N	73.06E	1662	6600	
Resolute Bay, N.W. Terr.	Resolute	REC	8.085	34.55W	33	7800	
Reykjavik, Iceland	Reykjavík	JRE	74.43N	94.59W	220	6500	7
Rimini, Italy	Rimini	REK	64.08N	21.57W	45	4700	
Rio de Janeiro, Brazil	Galeao		44.01N	12.37E	39	9810	
Riyadh, Saudi Arabia	Val eac	RIO	22.495	43.15W	10	10800	
Rome, Italy	C14=21=.	9.00	24.43N	46.42E	1818	6000	1
. cary	Ciampino	ROM	41.48N	12.36E	423	7218	
Saigon, Viet-Nam	Tan San Nhut	2011					
St. Croix, Virgin Is.	Jan Jan Hhut	SGN	10.49N	106.39E	33	7900	Ŧ
St. Kitts I., Leeward Is.,		STX	17.42N	64.48W			
B.W.I.		SKB	17.25N	62.45W			
St. Louis, Mo., U.S.A.	Lambert-St. Louis	CT!					
St. Lucia, B.W.I.	Tamber Cast. Louis	STL	38.45N	90.22W	571	10000	
St. Maarten, N.W.I.		SLU	13.45N	60.57W			
St. Thomas, Virgin Is.		SXH	18.03N	63.07W			
St. Vincent, Windward Is.		STT	18.20N	64.58W			
Sai Island, Cape Verde Is.	S=1	SVD	13.15N	61.12W	200		
Salisbury, S. Rhod.	361	SID	16.44N	22.57W	184	7054	
	San Antonio Int'i	SAY	17.565	31.06E	4904	8612	
	Lindbergh Field	SAT	29.32N	98.28W	800	8500	
Sandy Point, St. Kitts I.,	- mover gn riela	SAN	32.44N	117.11W	15	8100	
San Francisco, Calif., USA	San Francisco T-41		17.22N	62.51W			
San Jose, Guatemaia	San Liaucisco IVI,	SFO	37.38N	122.23W	10	9500	
		000	13.57N	90.51W			+

CITY - COUNTRY	AERODROME	CODE	LAT.	LONG.	ELEV.	
San Juan, Puerto Rico	Puerto Rico Int'l	SJU	18.26N	66 0001		ft.
San Pedro Sula, Honduras		SAP		66.00W	9	10000
San Salvador, Bahama Is.		SAL		74.31W		
Santa Maria, Azores	Santa Maria	SMA	36.58N	25.10W	205	10000
Santa Marta, Colombia		SMR	11.18N	74.10W	305	10000
Santiago, Chile	Los Cerrillos	SCL	33.30\$	70.42W	1675	8500
Santo Domingo, Dom. Rep.	Punta Caucedo Int'l		18.25N	69.40W	57	8500 8300
Sao Paulo, Brazil	Congonhas	SAO	23.375	46.39W	2628	6200
Sao Tome, Sao Tome Is.	-	THS	.19N	6.43E	16	0200
Sarajevo, Yugoslavia	Butmir	SJJ	43.49N	18.21E	1693	3900
Seattle, Washington, USA	Seattle-Tacoma Intil	SEA	47.27N	122.19W	428	9800
Seoul, Korea Seville, Spain	Kimpo AFB	SEL	37.34N	126.48E	64	8100
Shanghai, China	Moron AB	SVQ	37.10N	5.37E	287	11800
Shannon, Limerick, Irelan	d Shanna	SHA	31.15N	121.29E		
Sharjah, Oman	id Shannon	SNN	52.42N	8.55W	47	10000
Shemya Is., Alaska, USA	Shemya	SHJ	25.21N	55.24E	6	6900
Singapore, Str. Settlemen		SYA	52.43N	174.06E	95	10000
Skopje, Yugoslavia	co. aya Lebai	SIN	1.22N	103.59E	10	6000
Soerabaya, Indonesia	Tanjong Perok	SKP	41.59N	21.28E	783	39
Sofia, Bulgaria	Sofia	SOF	7.135	112.43E	10	5300
Sondrestromfjord,	Sondrestrom AB	SFJ	42.42N	23.24E	1830	6000
Greenland		3rJ	67.01N	50.42W	160	9200
Split, Yugoslavia	Sinj	SPU	43.42N	16.40E		
Stanleyville, Belgian	Stanleyville	SYV	.31N	25.10E	1262	700-
Congo	•		• ) ! !	25.106	1362	7087
Stockholm, Sweden	Arlanda	STO	59.39N	17.55E	112	10807
Sydney, Australia	Kingsford Smith	SYD	33.565	151.11E	10	10827 8290
Tablet Cont					10	02 90
Tahiti, Society Is.	Tahiti (FAAA)	PPT	17.335	149.37W	7	11200
Taipei, Formosa Tampa, Florida, U.S.A.	Taipei Int'l	TPE	25.C4N	121.32E	19	8500
Tananarive, Madagascar	Tampa Int'l	TPA	27.58N	82.32W	27	8300
Tarkan, Borneo	Arlvonimamo	TNR	19.025	47.10E	4757	8222
Tegucigalpa, Honduras		TRK	3.20N	117.34E		
Teheran, Iran	Mehrabad	TGU	14.03N	87.14W		
Tei Aviv-Jaffa, Israel	Lod	THR	35.41N	51.19E	3960	9840
Thule, Greenland	Thule AB	TLV	32.00N	34.54E	131	10000
Tokyo, Japan	Tokyo Int'l	THU	76.32N	68.45W	251	10000
Toronto, Ontario, Canada	Malton	TYO	35.33N	139.46E	11	8400
Townsville, Australia		YYZ	43.41N	79.38W	569	11000
Trinidad, Port of Spain	Plarco	TSV TND	19.155	146.46E		
Tripoli, Libya	Idris El Awal	TIP	10.36N 32.40N	61.21W	44	9500
Tunis, Tunisia	El Aoulna	TUN	36.51N	13.09E	263	7306
No. of the second second		. 0.1	JO. 514	10.14E	16	8620
Ushuala, Argentina		USH	54.495	68.19W	10	
Vancouver, B.C., Canada	Vancouver Int'	V				
Venice, Italy	Tessera	YUR	49.11N	123.10W	9	8600
Vienna, Austria	Schwechat	VCE	45.30N	12.20E	7	8875
		VIE	48.07N	16.34E	600	9840
		The	Boeing C	OMDany	06-7	177

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CITY - COUNTRY	AERODROME	CODE	LAT.	LONG.	ELEV.	RUNWAY ft.
Wadi Halfa, Sudan	Wadi Halfa	WHA	21.50N	31.18E	509	6003
Wake Island, Pacific Ocean	Naval Air Station	AWK	19.17N	166.39E	13	9800
Warsaw, Poland	Okec le	WAW	52.10N	20.58E	344	6562
Washington, D. C., U.S.A.	Washington National	DCA	38.51N	77.02W	15	6900
Wellington, New Zealand	Wellington	WLG	41.205	174.48E	38	5350
West End, Bahamas		WTD	26.40N	78.57W	,	2220
West Palm Beach, Fla., USA	Palm Beach Int'l	PBI	26.41N	80.06W	19	8000
Whitehorse, Canada	Whitehorse	YXY	60.43N	135.04W	2303	7200
Windhoek, S. W. Africa	J. G. Strydom	WDH	22.375	17.05E	- 505	,200
Winnipeg, Manitoba, Canada	Stevenson	YWG	49.54N	97.14W	785	8700
Yellowknife, N.W.T., Canada	Yellowknife	YZF	62.28N	114.27W	672	7500
Zagreb, Yugoslavia	Pleso	ZAG	45.44N	16.04E		
Zurich, Switzerland	Zurich	ZRH	47.27N	8.33E	1414	12139

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